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## TWO MSS OF THE ELDER PLINY.

The number of MSS of Pliny's Natural History is very great and amounts to some two hundred in all.<sup>1</sup> That total, however, includes many which do not contain more than a small portion of the text, and as most of them are of the fourteenth and fifteenth centuries they are of little value for critical purposes. Detlefsen indeed fixed 1200 as the boundary line within which to look for good MSS of Pliny, but subsequent criticism led him to modify, and admit exceptions to, this generalisation (*loc. cit.*). In his account of the MSS no mention is made of any in England, doubtless owing to the fact that Sillig in his edition (1851) had expressed an unfavourable judgment on the Arundel MS ( $\Delta$  in his list), though the importance of the excerptor Robert of Cricklade was recognised. But in the Teubner edition of Jan-Mayhoff (1892-1909) two from England are referred to with some approval, *codex Arundelianus* 98 (1) 12th cent., in the British Museum containing Books 1-18, and *codex Oxoniensis* 274 of about the same date, in the library of New College Oxford, containing Books 1-19. There are also some other ones which seem to deserve examination. The difficulties attendant on access to a private collection may account for the fact that the MS in the Phillipps collection at Cheltenham seems hitherto to have escaped attention.<sup>2</sup> There is a brief mention of it by

<sup>1</sup> The estimate of Detlefsen in *Philologus*, XXVIII (1869), p. 285, in the course of a long article which is fundamental for work on the MS tradition.

<sup>2</sup> I would express my thanks to T. FitzRoy Fenwick, Esq., the present owner of the collection, for his kindness during my visit to Cheltenham in July, 1934. I am also under a debt to the Moray Fund of Edinburgh University for a grant to enable me to fulfil the financial conditions incidental on a visit to this collection.

Schenkl in his account of that library in *Bibliotheca Patrum Latinorum*, but not elsewhere to my knowledge. As his description of it is not quite accurate nor complete another may be given. The MS is a large size folio on vellum and the inscription on the fly leaf at the front states that it came into the possession of Sir Thomas Phillipps Bart. (in whose own catalogue it is no. 8297) in 1836 from the library of Heber who had bought it from the MSS of the Abbey of Tongerlo in Flanders. This Norbertine Abbey contained the literary treasures collected by the Bollandists, and on its confiscation in 1796 by the French Republic the MSS were given into the care of certain citizens of Antwerp. Finally in 1826 they were sold at Antwerp and the majority found their way into the collection of Richard Heber.<sup>3</sup> The MS consists of 23 quaternions, signed with Roman numerals, but the first of these lacks 6 folios, and there are 5 folios at the end belonging to an uncompleted quaternion, thus giving 183 folios in all; the last two are torn down the middle of the left hand column and that part is wanting. The MS ends at 17.178 *uiribus, non aetate decernitur*, clearly so abruptly that some folios are lost; at the beginning Pliny's prefatory epistle<sup>4</sup> and Book 1, containing the names of authors and the tables of contents, are missing, as far as the words *Metrodoro, Cleobulo, Posidonio*, which end the author list of Book 4. The rest of Book 1 is written three columns to the folio, but the body of the text of 2-17 is two columns to the folio, not, as Schenkl's account might suggest, three, with some 38 lines to the column. The list of subjects and authors is repeated with each book. The date given to the MS in the Phillipps catalogue is ninth century and this, which is repeated by Schenkl, seems to be correct. It is that given also by Dr. E. A. Lowe of Oxford, who saw the MS last year during a visit to Cheltenham, and he inclines to the opinion it may have been written at Lorsch.<sup>5</sup> The attribution to Lorsch is interesting and may be

<sup>3</sup> See further *Haenel, Catalogi Librorum Manuscriptorum, s. v. Belgium*, col. 749.

<sup>4</sup> The original fly-leaves of the MS have of course also been lost; that now at the back has fol. 79 written on it in a modern hand.

<sup>5</sup> I wish to thank Dr. Lowe for communicating his views on the date and place of origin to me, though he expresses no more than an impression that Lorsch was the centre where it was written.

considered to derive some confirmation from another piece of evidence which shows the existence of MSS of Pliny at that centre. There are preserved for us "two early Lorsch copies of the library catalogue<sup>6</sup> (both in *Vat. Pal. lat.* 1877) one of which (on foll. 1-34) was written in the first part of the ninth century, the other (on foll. 44-79) somewhat later. And the single quire of a (summary) catalogue prefixed to *Pal. lat.* 57 is equally old." They have been printed in Becker's *Catalogi Bibliothecarum Antiqui* (Bonn 1885, nos. 37 and 38.) The entries are no. 37 *libri Plinii Secundi de natura rerum XXXVII in duobus voluminibus* and no. 38 *pars prima librorum plinii secundi de natura rerum in qua continentur libri XVII; pars secunda librorum plinii secundi de natura rerum in qua continentur lib. XX.* It is clear then that there were two MSS of Pliny at Lorsch in the ninth century, and that one of these contained Books 1-17, which no doubt was the content of the Phillipps MS before it suffered damage. The identification of the two cannot of course be proven, for it must not be forgotten that Pliny was often in two volumes, as for example the Arundel and Oxford MSS. But it will be seen that if the dating is correct c<sup>7</sup> is at least as old as, if not older than, any MS of Pliny for the greater part of the text contained in it. Furthermore, when Detlefsen traced families of the MSS to Northern France and S. W. Germany,<sup>8</sup> he pointed out that we did not know whether the latter represented one of the two existing classes of the younger tradition of the majority of MSS or a third. It will now be shown that the MS does not represent a third.

The MSS of Pliny are in two groups, the older which is very incomplete is represented in Books 1-17 by A = *Leidensis Vossianus* f. 4 9th cent. 2-6, M = *codex Moneus* 5/6th cent. a palimpsest of part of 11-15; the younger on which the text

<sup>6</sup> The words are those of Prof. W. M. Lindsay in "The (Early) Lorsch Scriptorium," *Palaeographia Latina*, Part iii, p. 10 (St. Andrew's Univ. Publications XIX).

<sup>7</sup> This symbol will be used henceforth in referring to the Cheltenham MS.

<sup>8</sup> See *Philologus*, XXVIII (1869), pp. 304-305. Reichenau, Bamberg (2), Murbach, and Lorsch are known to have had MSS once. Detlefsen's mention of Lorsch depended on Wilmanns, *Rhein. Mus.*, XXIII (1868), pp. 385 ff.

mainly depends falls into two classes (1) D = *Vat. lat.* 3861, 11th cent. 2.187-19.156, F = *Leid. Lipsii* n. VII, 11th cent. 1-37, R = *Florent. Riccardianus* 11th cent., mutilated in 14-20 (2) E = *Paris lat.* 6795 10/11th cent., a = *Vindobonensis* CCXXXIV 12/13 cent. It is clear that *Cheltenhamensis* belongs to the younger class for it has the displacement of quaternions common to these MSS whereby 4.67-5.34 is inserted after 2.187, and then book 2 is resumed. But the writer of the archetype of the second class of younger MSS, recognising the error, tried to correct it and instead made the confusion only greater, so that he produced the order after 2.187, 4.67- end of 4, 3.1-4.67, 5.34- end of 5, 5.1-34, 2.187- end of 2, 6.1-. This further displacement is unknown to c which therefore belongs to the group D. F. R. To obtain more accurate information it is necessary to examine the MS and a collation has been made of 2, 10, 16.1-106, in order to ascertain whether the text was uniform throughout such a large work, and also to obtain sufficient information for all purposes on a MS which may not be generally accessible.<sup>9</sup> The MS is very legible but full of scribal errors. Wrong division is frequent and there is continual confusion of such words as *quae* and *-que*, even when written in full. This fault is not however confined to c but is in all the other younger MSS also,<sup>10</sup> and is witnessed to by the complaint of the corrupt condition of contemporary copies of the works of Pliny, in the preface to the *De Mensura Orbis Terrae* composed in 825 by Dicuil, an Irishman.<sup>11</sup> Contractions are by no means numerous in the MS and conform to the continental type in minuscule. There are occasional traces of insular influence, thus *nor̄t* (*norunt*),<sup>12</sup> *pos̄st* (*possunt*), *quae* which is usually represented by *q̄* shows also an example of *q* with a triangle of three dots, the insular symbol,<sup>13</sup> as well as

<sup>9</sup> The present Teubner text has been taken as the standard for collation.

<sup>10</sup> On F see Teubner vol. i, appendix, p. 523, on R see Kroll, *Die Kosmologie des Plinius*, Breslau, 1930, which has an excursus on Text and Überlieferung, p. 80.

<sup>11</sup> His words are quoted by F. W. Hall, *A Companion to Classical Texts*, p. 80.

<sup>12</sup> See Lindsay, *Notae Latinae*, p. 369.

<sup>13</sup> *Ibid.*, p. 207.

two examples on one folio of  $q^a$ : which Lindsay regards as a St Amand type.<sup>14</sup> The abbreviation  $\bar{f}$  as usual represents *sunt*, but in 2.85 the correct text (l. 5) is *sed*, which is  $\bar{f}$  in insular script, and the scribe of c, with  $\bar{f}$ , may have confused the symbols. There is also an example of the English usage<sup>15</sup> of a triangle of dots over a syllable to be deleted. An examination of the readings of c will show that it is closest to F: 2. § 44 *pronosci* F c (in full), *praenosci* Ea, *pernosci* R; § 140 (l. 12) *o* F<sup>1</sup>c, *a* R<sup>1</sup>Ea, *et a* F<sup>2</sup>R<sup>2</sup>; § 234 *materia ignium* A, *materiae ignium* Fc, *ignium materia* (-iae a) REa, as well as many other readings where F c agree with R against Ea. But the cleavage between the two classes FRD and Ea is by no means strict, indeed Kroll has recently (*op. cit.*, p. 81) emphasised the agreement of E<sup>1</sup>F<sup>1</sup>a. It can be shown that c has readings along with Ea against F and R; § 43 *teste* RE<sup>1</sup>ac, *testes* F<sup>1</sup>; § 81 *uere* Eac, *uero* F<sup>1</sup>R<sup>1</sup>; § 82 *eis* R<sup>1</sup>E<sup>1</sup>ac, *is* F<sup>1</sup>; § 93 *ingenii* Eac, *ingeniis* FR; and the list could be lengthened considerably. In the case of omissions the agreement is again substantially with FR; § 45 *etiam om.* FR<sup>1</sup>ac; so § 98 *cos.*; § 99 *ex*; *ibid.* ll. 14, 15 Ea *om. Q*, read by FR, c<sup>2</sup> has *Q* also (l. 14 *que* c<sup>1</sup>, l. 15 *quae* c<sup>1</sup>); § 139 *a* FRc<sup>1</sup>, *om.* E<sup>1</sup>a; § 239 l. 7 *a* DF<sup>1</sup>R<sup>1</sup>c, *om.* Ea; § 247 *omni* AEa, *om.* DFR<sup>1</sup>c; on the other side are to be set § 84 *ad om.* E<sup>1</sup>ac; § 147 *post annum T. om.* E<sup>1</sup>ac, *annum T. om.* FR<sup>1</sup>; § 170 *e priore* E, *re a c*, *om.* F<sup>1</sup>R<sup>1</sup>; § 162 *nisi sit in spiritu* sic R<sup>2</sup>, *nisi in a*, *in F*, *om.* R<sup>1</sup>E<sup>1</sup>c. The last example among others shows that F cannot be a copy of c despite their closeness of relation. The hand of a corrector, apparently of a later date, has not been absent especially in Book 2, and all his corrections, except for a few obvious scribal errors, are towards changing readings of FR to those of Ea. One or two examples may be added: § 10 *spiritus* F<sup>1</sup>c<sup>1</sup>, *spiritum* Eac<sup>2</sup>; § 37 *trecens* F<sup>1</sup>c<sup>1</sup>, *recens* a c<sup>2</sup>; § 59 *discente* F<sup>1</sup>c<sup>1</sup>, *descendente* R<sup>1</sup>E<sup>2</sup>ac<sup>2</sup>, *descente* E<sup>1</sup>. The MS therefore contributes little or nothing that is not in some one or other of our MS sources for the text of Book 2,

<sup>14</sup> *Ibid.*, p. 213.

<sup>15</sup> So Lindsay, *Palaeographica Latina*, Part iii, "The (Early) Lorsch Scriptorium," quoting an example from there p. 48. In the example from Pliny the deletion of a whole word is indicated, and the dots are repeated with the correction in the margin.

but it may be used to support some readings which hitherto have been dependent only on a single MS. In § 3 the Vulgate text has *quasi non eadem quaestione semper in termino cogitationis occursura desiderio finis alicuius aut, . . . non idem illud in uno facilius sit intellegi*. The change from ablative absolute to a finite clause after *quasi* is abrupt, hence, Mayhoff reads *eadem quaestiones . . . cogitationi sint occursurae . . .* in the first clause; the MSS read *eadem quaestiones* E<sup>1</sup>F<sup>2</sup>c, *eadem quaestione* E<sup>2</sup> 1 F<sup>1</sup> (-onis F<sup>1</sup>) / *cogitationi sint* F<sup>2</sup>, *cogitationis* EF<sup>1</sup>1ca / *occursurae* F<sup>2</sup> -urae et Ec (-urę et c), -ura et Fa, -ura 1 / *desiderio* E<sup>2</sup> 1, *siderio* E<sup>1</sup> F<sup>1</sup>ac, *si deerit* F<sup>2</sup>. Here c seems to give a better text than F<sup>1</sup>, if its first and second hands have been rightly distinguished, and to favour Mayhoff's text. In § 9 c has *discripto* with F<sup>1</sup> rightly against *descripto* of all other MSS; and in § 19 *dubitemusne* (*debitem'ne* and the first *e* corrected to *u*) with 1 a d (*Paris. Lat.* 6797<sup>16</sup>), against *debitem ne* F<sup>1</sup>, *dubitemusue* E. In § 49 *non sit ut* was first written by the scribe as in Rd, but later corrected to *ut non sit* of EFd<sup>3</sup> 1; Sillig approved of *non sit ut* and the same order of words is found in MSS at 7.1 and 10.82. It may well be correct. In § 85 Detlefsen, followed by Mayhoff read *altitudinem esse, in quam nubila ac uenti nubesque perueniant*, as in 1 a and the excerptor Robert of Cricklade (o) against *qua* of FRE and the vulgate, c has *quā*, i. e. *quam*; so it is probable in § 86 that *partibus* should not be in the text,<sup>17</sup> it is omitted by FRad<sup>1</sup>, is only suprascript in c and depends on 1E<sup>3</sup>d<sup>7</sup>. All editors read *L Opimio Q. Fabio cos.* in § 98, except Sillig who omits *cos.*; as in § 99 it should only come with the last pair of consuls given. MSS confirm the view, it is omitted by FRc and inserted by 1 E<sup>3</sup>d<sup>7</sup>. In § 112 *fulgetras* would seem to be right, as in Mayhoff, against *fulgetra*; MSS are *fulgetras* d R<sup>1</sup>E, *fulgidas* a, *fulgetra* 1 F<sup>2</sup>oR<sup>1</sup> (?) E<sup>2</sup> (*e corr.*), c reads *fulget* has corrected to *fulgetras*. It is probable that the right spelling in § 115 is *delmatia*<sup>18</sup> F<sup>2</sup> d; *delmatiae* F<sup>1</sup>Rc (*e corr. dalmatiae*), *dalmatia*

<sup>16</sup> This MS has recently been assessed afresh by Münch, *Wert und Stellung der Handschrift d in Plinius Naturalis Historia*, Breslau, 1930.

<sup>17</sup> For an attempt to explain the passage with its omission see Kroll, *op. cit.*, p. 24.

<sup>18</sup> See Kroll, *op. cit.*, p. 86.

E<sup>2</sup> d<sup>2</sup>, *dalmatiae* E<sup>1</sup>1; in § 120 c reads *notum*, with the excerptor o, for *nothum* F E d, and R<sup>7</sup> *noton*, which is the vulgate text. In § 135 e (*diuerso*) is read with F<sup>2</sup> and y, an early excerptor, by Detlefsen and Mayhoff for *et* F<sup>1</sup>REa, c had originally *et* but the "t" was scraped out. This might show that some of F<sup>2</sup> corrections are those of the original scribe and not subsequent changes from another MS. The rare word *spectu* was first read by Jan (after Urlichs) for the Vulgate *respectu* § 143, it is in F R d<sup>1</sup> while *aspectu* is in Ea, c has *spectu* with 'a' suprascript in a lighter colour of ink. The vulgate text in § 180 was *saepius* which Detlefsen altered to *serius* by conjecture apparently; it was retained by Mayhoff on the slight authority of a, but it is also in c, while FR<sup>2</sup> 1o have *sepius*, R<sup>1</sup> *sei///us*. Names are given with fair correctness, thus § 211 *in uiciente* is correct, but n has been added suprascript to give *in ueniente* as in F<sup>1</sup>R<sup>1</sup>E<sup>1</sup>a, while AF<sup>2</sup> is *inuiehiente*. In Book 10 the edition of Mayhoff depends on FRa, and no MSS of the older group are available. Therefore in a good many places readings are in the text which rely on the vulgate tradition and have not been confirmed by MSS at the disposal of editors; thus § 19 *ex aduerso orbe* where FRa agree in giving *ex aduersa urbe*, except *aduerso* in F<sup>2</sup>, c has the reading of FRa, but there are clear signs that an original 'o' in both words has been corrected. In § 26 *procedit uere (coccyx) occultatur caniculae ortu, interque parit in alienis nidis* was the vulgate reading which Mayhoff altered to *inter quae*, and this is perhaps in c (*quē*); so in § 30 *ut quae* R c (*quē* c), *utque* F, *ut* a, though the scribe is so careless in distinguishing *-que* and *quae* that little reliance can be placed on any particular place; in § 29 *uti* depends on a, it is also the reading of c; F *ut* //, R *ut*. The vulgate reading in § 110 was *retia amne*, so Ra; Mayhoff gave *retia in amne* with F<sup>1</sup>, c supports the latter with *retiam amne*; in § 156 it has the better spellings *pinnis*, *pumilionum*, while in § 163 it supports *tepidiores* of the vulgate for *tepidioris* of FRa, and again in § 172 *mercenariae* for *mercedariae* of FR (a is wanting at this point). The MS can at most only supplement our chief sources FRE, it cannot displace them because of their important corrections by the second hands which are regarded as drawn from MSS connected with the older group.

There is however another MS in England which is in a dif-

ferent position, viz. *Auct. T.* 1. 27 in the Bodleian at Oxford.<sup>19</sup> The account of it in the Summary Catalogue of Western MSS, vol. IV, where it is no. 20621 states that it was written in the 12th cent. and contains from the close of bk. 5 to the end of bk. 15, being foll. 45-116 of a larger MS. It once belonged to the Jesuit College of Clermont at Paris, thereafter it was the property of the Meerman collection, from which in 1824 it was bought by the Bodleian. The MS has been in water at some time and the first 44 folios have apparently been thrown away because of the damage thus sustained; f. 45 is badly blurred, especially on the right-hand side, and the following ff. similarly, though to a less extent. The rotograph is therefore for this and other reasons chosen from the middle of the MS bk. 10, §§ 1-80 *canit*. The MS is in a very clear hand, carefully written, in fact the wrong division and other scribal errors which characterise the principal MSS of Pliny are conspicuously absent. There are a fair number of corrections, apparently in a later hand, and a few additions in the margin of which some may be very late. The text is in double columns of 47 lines each. An assessment of the value of this MS (which for convenience will be referred to as b) must depend on a comparison of its readings with FREa, as used by the Teubner editor in bk. 10. It very soon becomes clear that b bears a close resemblance to the hand known as E<sup>2</sup>, i. e. the corrections in E which are regarded as derived from a MS which shows the older traditions. Thus of the readings listed as E<sup>2</sup>, E<sup>2</sup>F<sup>2</sup> or E<sup>2</sup>R<sup>2</sup> in 10, 1-80, b has no less than 48 in common while the differences are few.

7 fors FRE<sup>2</sup> foris b sors b<sup>2</sup>.

8 mori (nari F<sup>2</sup>) per lacus E<sup>2</sup>F<sup>2</sup> morari per lacus b.

18 est percelebris F<sup>2</sup>E<sup>2</sup> semper celebris b.

19 attigit FE<sup>2</sup> attingit b.

36 spinthuricem F<sup>2</sup>E<sup>2</sup> spinturicem b.

56 chelanopes E<sup>2</sup> chenalopes b.

<sup>19</sup> I wish to thank Professor Souter of Aberdeen for calling my attention to this MS, also Mr. J. M. Wyllie of the Oxford Latin Dictionary for his assistance in procuring a rotograph of part of the MS and on other matters. The account in the Bodleian Catalogue is in error on one point he tells me. The top quarter or so of the first column had contained the end of bk. 6 (not of 5 as stated in the Catalogue), but this has been cut off so that the part of the MS preserved might begin with bk. 7.

70 *africos* F<sup>2</sup>E<sup>2</sup> *affricos* b.

70 *Bizaes* E<sup>2</sup> *Bizecis* b, *Bizetis* b<sup>2</sup>.

76 *quaeue ista* F<sup>2</sup>E<sup>2</sup> *quaeue his* b.

In a few cases the second hand of b has altered an agreement of the first hand into a disagreement, thus § 7 *boethius* b<sup>2</sup>, § 8 *percipiturus* b<sup>2</sup>, § 12 *alio* suprascript *quin* b<sup>2</sup>, § 41 *conscerpit* b<sup>2</sup>. Agreements with R<sup>2</sup> also occur, but the corrections of this hand in R are much less numerous than E<sup>2</sup>, so examples are fewer; § 6 *morphos* R<sup>2</sup> b<sup>2</sup>, § 7 *cauentem item* R<sup>2</sup> b, § 9 *penarum* R<sup>2</sup>b, § 10 *conniuentem* R<sup>2</sup> b<sup>2</sup>, § 49 *magistratus* R<sup>2</sup> b, § 50 *fit* F<sup>2</sup> R<sup>2</sup>b, § 63 *ad* F<sup>2</sup> R<sup>2</sup> b, *om.* F<sup>1</sup>R<sup>1</sup>a, § 66 *per sua signa* R<sup>2</sup>b<sup>2</sup> (*persuasa* b<sup>1</sup>). With F<sup>2</sup> alone the agreements are: § 9 *respersus* F<sup>2</sup>b, § 25 *capite* F<sup>2</sup>b, § 40 *strepitu* F<sup>2</sup> Eb, § 45 *is* F<sup>2</sup> ab<sup>1</sup> (*HS* b<sup>2</sup>), § 75 *quia* F<sup>2</sup>b; but that comprises only the minor part, for the second hand of b agrees frequently with F<sup>2</sup>, which shows that b was corrected from a MS which embodied a good tradition: § 3 *facies* F<sup>2</sup>b<sup>2</sup>, § 4 *casiae* F<sup>2</sup>b<sup>2</sup> (*cassiae* b<sup>1</sup>), § 12 *utilis nihil* F<sup>2</sup>b<sup>2</sup> (*utilis sup. scr.*), § 15 *negant umquam* F<sup>2</sup>b<sup>2</sup> (*in marg.*), § 31 *cranonem* F<sup>2</sup>R, *cranonen* b<sup>2</sup>, § 40 *auspiciis* F<sup>2</sup>b<sup>2</sup>, § 45 *exque eo* F<sup>2</sup> (E?) b<sup>2</sup>, § 54 *auxiliorum* F<sup>2</sup>b<sup>2</sup> (*in marg.*), § 63 *dilatante* F<sup>2</sup>b<sup>2</sup>, § 75 *casmi* F<sup>2</sup>b<sup>2</sup>. But from a rotograph it is difficult to distinguish whether all these corrections are by the same hand. The editors of the Teubner text have printed in italics the readings which depend on the vulgate tradition and were not in the MSS collated by them at any particular point. It has been long recognized that early editors must have had at their disposal MSS not now available, e. g. that cited by Beatus Rhenanus, codex *Murbacensis*, or those of Dalecampius, but readings with such authority have to be accepted with care as they may embody mere conjectures. The following are the cases where b confirms the vulgate readings, against FRa, for which I use the symbol w.

b, and Vulgate (v)	Agreement of FRa (= w)
1 <i>similes</i> (E?)	<i>similis</i> w.
4 <i>manilius</i>	<i>mamilius</i> w.
7 l. 15 <i>eius</i>	<i>ei</i> w
14 <i>par</i> (E?)	<i>per</i> w.
20 l. 18 <i>sanqualem</i>	<i>samqualem</i> w.
21 <i>buteonem</i> v., <i>buceonem</i> b <sup>2</sup> <i>familia</i> (e <i>corr.</i> )	<i>butionem</i> RE, <i>bucio-</i> Fab <sup>1</sup> <i>familiam</i> w.

	b, and Vulgate (v)	Agreement of FRa (= w)
22	insula (E?)	insulae w.
41	principales	principalis w.
46	uenientem (E?)	ueniente w.
50	pinguescunt (RE?)	pinne-F, penne-ad.
54	possint	possunt w.
55	gelido (R?)	gelidū w.
56	absolutaque (R?) nigritia (e corr.)	absolutamque nigritiam w.
61	ueniant	eueniant w.
67	incomitatam (ā)	incomitata w.
71	significaret	significare w.
76	rhodos	rodos w.
	insubrum	insobrum w.
	graculorum e corr. (crac-b <sup>2</sup> )	grag- FR, galg - a.

Besides these readings shared by b with the vulgate text, it contains others which have been commended by editors at various times and some of which are in the text. Thus in § 3 Salmasius and Hardouin read *fauces*, and are followed by Mayhoff, while the vulgate is *faciem*, the original hand of b had *fauces* too, but the correcter altered it suprascript to *facies*; in § 4 *quingentis sexaginta* with Brotier, and in § 5 *tradidit* with Hardouin and Brotier, are read; § 9 (l. 9) has the correct *illa* of the editio Venetiae (1507), and § 18 may be taken as supporting *gloria est: educatam*, which Mayhoff reads with Pintian. The first hand of b wrote *gloria ee ductam* with the majority of MSS, but a corrector in the margin substituted *educatam* without erasing *ductam*. There is also an erasure dot under the second *e* of *ee*. The reading in § 21 *Phemonoe dedit* has been constructed from the conflict of MSS, it is in b<sup>2</sup>, and b<sup>1</sup> differs only by having *Phim-*. Mayhoff's conjecture in § 26 *inter quae* has been already mentioned as in the Cheltenham MS, it is also in b (*que*), though a later hand alters to *interdum*. Some readings of Gelenius are also found: § 40 *arbori* (*arboris* b<sup>1</sup>), § 42 l. 16 *quaeque* (E?), § 62 *Pythonos* (E?), § 65 *hae* (*he* in b): in § 51 *digressum* (*-us* b<sup>1</sup>) is already in Caesarius' edition of 1524, and in § 45 for *his* and *is* of MSS, which were only rightly

changed by Detlefsen to *HS*, *b* has the correct form in the margin though *is* is in the text. Enough has now been said to indicate the quality of this MS which must be regarded as equal, if not superior, to those on which the text is now based. It has been shown to adhere most closely to *E*<sup>2</sup> but the fact that most of its agreements with that MS are by its first hand gives it a superior position, as editors find it very difficult to separate *E*<sup>2</sup> and *E*<sup>3</sup> (see Kroll, *op. cit.*, p. 81). Although these two MSS chance to be in England they are of continental origin (though on the available evidence it does not seem possible to attribute *b* to the families of MSS of N. France and S. W. Germany). It is believed that there was also a distinct tradition of the text of the Natural History preserved in England through the Middle Ages, which can be traced back to the seventh century<sup>20</sup> and with this I hope to deal at some future time.

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<sup>20</sup> See *C. R.*, VII (1893), pp. 451-2.

## TWO GREEK FORGERIES OF THE SIXTEENTH CENTURY.

The geographical opuscula of Nicephorus Blemmides (*Geogr. Graec. Min.* II, pp. 458-470) were compiled by Antonius Episcopus. The name Demetrius of Lampsacus was attached to the scholia on Dionysius Periegetes (*ibid.*, p. 427) by Constantine Palaeocappa.

Ancient and medieval literature is full of treatises of uncertain origin. The process of publication has become sufficiently refined in modern times to restrict effectively the freedom of fraud and error in ascribing works to their authors; but for early times it is necessary to scrutinize the text and tradition before accepting any ascription whatever. A large number of pseudepigrapha have been revealed, and it is generally realized now that the mere name of an author in a title must be confirmed by other evidence. In Greek literature one of the most fruitful periods for false titles was the sixteenth century, when the profession of scribes, left high and dry by the spread of printing, sought to raise the level of the sea by producing new works of old authors. This tendency was so strong that it may be stated as a general rule that classical and Byzantine texts which do not occur in manuscripts earlier than the sixteenth century are open to suspicion for that reason alone. In the following pages I shall discuss two examples of this rule.

### I.

Nicephorus Blemmides, Geographical Opuscula.

In Müller's *Geographi Graeci Minores* II (Paris, 1855), pp. 458-470, is printed a small work ascribed to the 13th century scholar Nicephorus Blemmides. It consists of two parts, a γεωγραφία συνοπτική and a ἑτέρα ἱστορία περὶ τῆς γῆς. An examination of the MSS<sup>1</sup> of this text, all of which are of the 16th century, throws a clear light on its origin.

The first part occurs separately in several MSS. In Vatic. Pii II 53, Neapol. 224, Taurin. 234 it is entitled γεωγραφία συντομωτέρα Νικηφόρου φιλοσόφου τοῦ Βλεμμίδου, and in the first of these it is subscribed, ἐμετεγράφη δὲ ἀπὸ ἑτερον παλαιὸν βιβλίον διαχειρὸς ἱακόβου ἐπισκοποῦλου ὁ κρῆς. This part consists entirely of a

<sup>1</sup> In this article the MSS I have seen myself are marked with an asterisk. For the others I rely on the standard catalogues. Cf. Schissel, *Kataloge griechischer Handschriften* (Graz, 1924).

synopsis of the geographical poem of Dionysius Periegetes with scholia. It has many peculiarities that would serve to locate it definitely in some branch of the tradition of Dionysius, if the manuscripts of that author were better known. Moreover it is composed with such a lack of intelligence and originality that it can scarcely be by Nicephorus Blemmides, who was no mean scholar. I strongly suspect that Jacob Episcopus is the author and that his *παλαιὸν βιβλίον* was a MS of Dionysius' poem.

In other MSS this text is entitled *Νικηφόρου (φιλοσόφου) τοῦ Βλεμμίδους γεωγραφία συνοπτική*, viz., \* Bodl. Laud. 52; Scorial. Ω, IV, 29; \* Coislin. 388; \* Paris. 1414. Laud. 52 is subscribed *ἐν βενετία εἰς τὸν μέγαν γέωργιον διαχειρὸς ἀντωνίου ἐπισκοποπούλου πρωτοψάλτου κυδωνίας ἀφ' ἧ ἀπριλλί μηνί*; and Paris. 1414 is in the same hand.<sup>2</sup> What relation existed between the well-known scribe Ant. Episcopus<sup>3</sup> and the otherwise unknown Jac. Episcopus can only be conjectured. A comparison of Antonius' two copies, however, gives the clue to the *ἐτέρα ἱστορία*. In Laud.

<sup>2</sup> Paris. 1414, 2300, 2869 are all of the same size and in the same hand, the last two signed by Ant. Episcopus in 1569. Omont, *Inventaire Sommaire*, designates these three MSS as coming from the library of Cardinal Mazarin, which included that of Gabriel Naudé (d. 1653). A catalogue of Naudé's Greek MSS, 88 in number, is preserved in \*Paris. lat. 10381, and the three MSS above are among them. Many of Naudé's MSS came ultimately from the library of Cardinal Sirleto (d. 1586). For a catalogue of Sirleto's Greek MSS was published by E. Miller, *Cat. des mss. grecs de l'Escorial* (Paris, 1868), pp. 306-332; and several of them are plainly identical with Naudé-Mazarin MSS at Paris: Theol. 299 = 2869 + 2300 + 1414, Math. 2 = 1406, Math. 6 = 2440, Math. 17 = 2326, Math. 24 = 2475, Phil. 8 = 2139, Phil. 16 = 1818, Rhet. 26 = 1744. The Sirleto collection was in the possession of the Duc d'Altemps in Rome in the middle of the 17th century. The remains of it were later purchased for the Vatican by Cardinal Ottobuoni. The MSS above are missing from the present Ottobuoni collection. Sirleto Math. 22 also contained the *Geography* of Nicephorus Blemmides, but I cannot say what has become of it.

<sup>3</sup> The dated MSS of Ant. Episcopus fall in the sixties of the 16th century (Vogel-Gardthausen, *Die griechischen Schreiber, Beihefte zum Zentralblatt für Bibliothekswesen* XXXIII [1909], pp. 35 f.). However the first part of \*Paris. 2972, which was in the d'Asola collection brought to Fontainebleau in 1542 (Omont, *Cat. des mss. grecs de Fontainebleau* [Paris, 1888], pp. vi, 150), and also a large number of MSS in the Pelicier collection formed at Venice 1539-1542 and now preserved at Berlin (Studemund-Cohn, *Verzeichnis der griech. Hss. zu Berlin* [Berlin, 1890], p. ii) seem to be in Episcopus' hand, though they are not signed.

52 the γεωγραφία συνοπτική occupies fol. 3-26<sup>r</sup> and is subscribed as above. On fol. 26<sup>v</sup>-29<sup>r</sup> there follows in the same hand a text entitled *ιστορία διονυσίου τοῦ ἀρεοπαγίτου*. It consists of four chapters, three of which are taken verbatim from Psellus' ἐπιλύσεις (Migne, *Patrologia Graeca* CXXII, pp. 783-810): I = Psell. 25, II = Psell. 1, IV = Psell. 2 as far as *Περσίας ἐστὶν ἐπέκεινα* (787 C). The projected *ιστορία* is probably unfinished (fol. 29<sup>v</sup>-32<sup>v</sup> are blank). The third chapter is from another source and I reproduce it here: + περὶ τοῦ σχήματος τῆς γῆς· τὸ τῆς γῆς σχῆμα οὔτε τετράγωνον ἐστὶ οὔτε τρίγωνον οὔτε πάλιν ὀλοστρόγγυλον· ἀλλὰ μακροστρόγγυλον ἐστὶ τὸ σχῆμα τῆς γῆς, καὶ ἀπλῶς εἰπεῖν αὐγοκαταστατὸ τῆς γῆς σχῆμα. λέγεται δὲ ἡ γῆ κατ' ἑλληνας διαλέκτων χαί· ἡμεῖς δὲ λέγομεν αὐτὴν γαῖαν καὶ γῆν ὁμοίως τῶν ἐλλήνων χοῦν. ἐνὶ δὲ τὸ μῆκος τῆς γῆς ἀπὸ ἀνατολῶν μέχρι δύσεως στάδια μυριάδες κ̄ε· ἀπὸ δὲ ἄρκτους μέχρι μεσημβρίας στάδια μυριάδες ιβ̄· ὥστε διπλάζει τὸ μῆκος κατὰ τὸ πλάτος. τὸ στάδιον ἐνὶ ὀργίας ρ̄· στάδια ζ̄ εἰσὶν μῆλιον ἓν, ἐπεὶ τὸ μῆλιον ἐπτακοσίας ν̄ ὀργίας εἰσὶν.

In \* Paris. 1414 the γεωγραφία συνοπτική (fol. 1-43<sup>r</sup>) is followed by the *ἐτέρα ιστορία* (fol. 43<sup>v</sup>-50<sup>v</sup>) ascribed to Nicephorus, with title and text as in Müller, pp. 469 f. Most of this *ιστορία* also is taken from Psellus (1-3), though with greater freedom of wording. There are two irrelevant interpolations in 469b, on the number of stades in a mile (17-21) and the number of degrees in a sign of the zodiac (23-25). At the end (470b) there are two more passages foreign to Psellus, on arctic days and nights (6-25) and on the dimensions of the world (26-31). It is noteworthy that these two passages stand on separate pages with initials of their own in Paris. 1414 (fol. 49<sup>v</sup>-50<sup>r</sup> and 50<sup>v</sup>). The first and last of the four interpolations will be recognized as coinciding with sentences in the third chapter of the *ιστορία* in Laud. 52.

The non-Psellian material in both *ιστορίαι* came from a single source. It is a collection of unlearned geographical chrestomathies that occurs in many 15th century MSS: Ambros. B 33 sup., fol. 18 ff.; Paris. 2494, fol. 60-63; Palat. 364, fol. 84-89; Urb. 76, fol. 100<sup>v</sup>-107; \* Br. Mus. add. 34060, fol. 414-422; etc. Several of these MSS are described in the *Catalogus codicum astrologorum graecorum*, and parts of the text are printed (VIII 4, p. 111).

I think it is plain that the *ἐτέρα ιστορία* of Nicephorus Blemmides and also the *ιστορία* of Dionysius the Areopagite were

compiled from Psellus and the chrestomathies by Ant. Episcopus in 1568/9. The *ιστορίαι* thus confirm the suspicion already held regarding the *γεωγραφία* with which they are both so closely associated. The false titles were doubtless forged in order to increase the value of the MSS, several of which are in the forger's own hand. Blemmides' name was probably suggested by the fact that his genuine *εἰσαγωγικὴ ἐπιτομή* occurs frequently in MSS with Psellus' *ἐπιλύσεις* (Marc. 528 etc.).

The propagation of these false texts was advanced by a worthy successor of Episcopus, the well-known scribe Andreas Darmarius (ca. 1560-1586: Vogel-Gardthausen, *op. cit.*, pp. 16-27), who chanced on Scorial. Ω, IV, 29 in the library of the Spaniard Antonius Augustinus and made several copies of it for commercial consumption. Ambros. 336, Taurin. 264, Br. Mus. Old Royal 16, C, XIV, and \* Bodl. Savile 8 are all in his hand. Within a few years of their perpetration, therefore, these forgeries were broadcast in a dozen copies, and they have made a corresponding impression on the learned world. One of the first to mention them, however, recognized the dependence on Dionysius and Psellus (*Lucae Holstenii epistolae*, ed. Boissonade [Paris, 1817], pp. 19, 53). Nevertheless there are several copies by 17th century scholars (Barber. 18, 107, 196; Vallic. 164; Copenhagen packet A, Upsala 37; Cambridge univ. 336), and they have been printed at least four times, by Spohn (1818), Manzi (1819), Bernhardt (1828) and Müller (1861). Heisenberg, *Nic. Blemm. curriculum vitae* (Teubner, 1896), devotes four pages to them unsuspectingly (LX-LXIII); Krumbacher, *Byz. Literaturgeschichte*<sup>2</sup>, pp. 414, 446 f., mentions them respectfully; and Honigsmann, *Die sieben Klimata* (Heidelberg, 1929), p. 99, uses them as evidence for Byzantine geography. It is hoped that this weight will be transferred to Psellus' *ἐπιλύσεις σύντομοι φυσικῶν ζητημάτων*, which is a valuable but neglected work. Only part of it is in print, and that very defectively.

## II.

Demetrius of Lampsacus, Scholia on Dionysius Periegetes.

The scholia on Dionysius Periegetes are printed in Müller's *Geogr. Graec. Min.* II, pp. 427-457. The editor relies heavily on a cod. Q, which presents some unique features. It contains portions of the *vita* (p. 427a) not found in other MSS; and it ascribes the scholia, which are anonymous in other MSS, to one

Demetrius of Lampsacus, an author entirely unknown from any other source. Such a high-sounding name in such slender circumstances may well give us pause.

Müller's Q is \* Paris. suppl. 36, a 16th century paper codex of 108 leaves. It contains the *vita* (fol. 1<sup>v</sup>) as printed by Müller (p. 427a), followed by the poem itself (fol. 2 ff.), the latter written in sections alternating with passages in prose, which consist of corresponding sections of the scholia at first (Müller pp. 428 ff.) and later of the paraphrase (pp. 409-425). There are two illuminated title-pieces, on fol. 1<sup>v</sup> ΓΕΝΟΣ ΔΙΟΝΤΣΙΟΥ ΑΛΕΞΑΝΔΡΕΩΣ ΤΟΥ ΠΕΡΙΗΓΗΤΟΥ and on fol. 2<sup>r</sup> ΔΗΜΗΤΡΙΟΥ ΑΛΕΞΑΚΗΝΟΥ ΕΞΗΓΗΣΙΣ ΕΙΣ ΤΗΝ ΔΙΟΝΤΣΙΟΥ ΠΕΡΙΗΓΗΣΙΝ. The most significant fact about the MS, however, is that it is written in the hand of Constantine Palaeocappa, as was observed by Omont, *Inv. Somm.*, p. 207. To one who recalls the activities of this scribe the case of Demetrius of Lampsacus now becomes clear.

In 1542 Constantine Palaeocappa <sup>4</sup> was a monk on Mt. Athos; in 1551 he died at Venice. Between these dates he was employed as a scribe in the royal library at Fontainebleau, where he assisted in compiling the catalogues of the Greek MSS published by Omont (see note 3). He also copied many MSS and in so doing often added titles and interpolations foreign to the original text. He usually drew authors and titles from Suidas and inscribed them over anonymous works. His most notorious perpetration is the *Violarium* of Eudocia, but a series of smaller and more troublesome forgeries has also come to light.

Demetrius of Lampsacus in the illuminated title-piece plainly belongs to this series. When Palaeocappa catalogued \* Paris. 2708, which contains Dionysius' poem with the anonymous paraphrase and Eustathius' commentary, he remarked: Διονύσιος ὁ Περιηγητῆς, μετὰ τινος ἐξηγήσεως, ἧς τὸ ὄνομα τοῦ ἐξηγητοῦ οὐκ ἐπιγράφεται (Omont, *Cat. de Font.*, p. 85).<sup>5</sup> The itch to remedy

<sup>4</sup> See L. Cohn, "Konstantin Palaeocappa und Jakob Diassorinos," *Philologische Abhandlungen Martin Hertz . . . dargebracht* (Berlin, 1888), pp. 123-143; and Vogel-Gardthausen, *op. cit.*, pp. 247-250. It should be pointed out that Cohn in his study of Palaeocappa's forgeries often postulates the use of Paris MSS which Omont, *Inv. Somm.*, designates as Medicean. The library of Catherine de Medici, however, did not come to France until after Palaeocappa's death.

<sup>5</sup> Paris. 2708 was used by Palaeocappa in copying \*Paris. 2731, which contains Dionysius and Eustathius in his hand. For both MSS have a lacuna in Eust., *G. G. M.* II, pp. 372, 29-379, 26, although 379, 8-26 has

the deficiency is evident. He perhaps took his cue from Suidas Δ 430: Δημήτριος ὁ ἐπὶ κλην ἱξίων γραμματικὸς Ἀδραμυττηνός . . . ἔγραψε . . . εἰς Ὅμηρον ἐξήγησιν, εἰς Ἡσίοδον ὁμοίως. He would be prevented from applying this notice directly by the fact that Demetrius Ixion and Dionysius Periegetes are both said to have lived in the time of Augustus. The unique portion of the *vita* was taken from Eustathius, pp. 215, 9-17.

It is characteristic of Müller's work that he allowed his text of the scholia on Dionysius to be distorted by the influence of such a worthless MS as Paris. suppl. 36. The result is a number of unsuspected interpolations that do not belong to the genuine tradition and obscure its true nature. For instance several secondary notes in \*Paris. 2708 are included (432a 17-23; 443a 40-b 2 = Eust. 268, 17-20; 455a 37-43 = Steph. Byz. Ἑλαία). A much better notion of the tradition can be gained from the specimen published by Ludwich, *Aristarchs homerische Textkritik* II (Leipzig, 1885), pp. 576 ff. Since these scholia occur in the oldest MSS of Dionysius Periegetes (10th century) and contain good classical material, they deserve better attention.

Another example of this feeble appraisal of materials is found in the apparatus on Eustathius' commentary on Dionysius (*G. G. M.* II, pp. 201-407). Müller quotes the readings of \*Paris. 2855 (D, 14th century) and \*Paris. 2708 (L, 15th-16th centuries) meticulously throughout. Yet it is evident on the slightest inspection that the Eustathius in 2708 was copied from 2855. Both MSS have three large lacunae due simply to the loss of leaves in 2855: 296, 10-299, 2; 372, 29-379, 26; 400, 13-407, 16.<sup>6</sup> 2855 is poorly written and at times scarcely legible, and hence 2708 has many peculiar readings that are purely conjectural on the part of its scribe. The time spent on such material is worse than wasted, since it burdens the apparatus with confusing evidence.

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been supplied in 2731 from another MS. 2731 in turn was the basis of R. Stephanus' first edition of Eustathius on Dionysius (Paris, 1547), since it repeats this patchwork of lacunae exactly (see Müller on Eust. 372, 29). Was Palaeocappa an editor for Stephanus?

<sup>6</sup> There is no lacuna at 389, 26-393, 6; but the leaf that bears this text in 2855 (fol. 48) is now out of order. Paris. 2708 is the archetype of two other MSS, Vindob. (now Vatic.) Ross. 28 entire and \*Br. Mus. Burn. 98, pp. 161-488. The attempt to supplement the lacunae in Eustathius by excerpts from Strabo and Steph. Byz. is plainly original in the archetype.

## THE HERCULES LEGEND ON THE ETRUSCAN MIRROR FROM VOLTERRA.

*eca : sren :/ tva : iχna/c : hercle : unial : cl/an :  
θra : sce*

"haec (est) monstratio (?) quomodo (?) mortalis (?) Hercules  
Junonis filius legitimus factus sit."

The Etruscan inscription cited above is preserved on a mirror dating from the 4th century B. C.<sup>1</sup> My attempted translation is based on the scene represented of which the inscription forms part and whose signification has now been explained by Jean Bayet.<sup>2</sup>

The picture shows Hercules as a bearded man, with his club and his lion's skin, in a half-kneeling position near Juno, who is offering him her breast. There are present two other goddesses, Apollo, and Jupiter, the last holding his sceptre in one hand and pointing with the other to a tablet which is fastened to a column and which bears the inscription.

This scene, showing Hercules on Olympus, apparently has a symbolic meaning; it represents the adoption of the hero by Juno. The act of suckling (implying a new birth) as a juristic symbol for the performance of an adoption is also known from other peoples.<sup>3</sup> In the case of Hercules, his new birth is at the same time a resurrection. According to Bayet it includes the gift of immortality, since the suckling is performed by a deity. This assumption is confirmed by the three words of the inscription that have been clearly translated: *hercle unial clan*, "Hercules Junonis filius."

The passage *hercle unial clan θra sce* is obviously a sentence. It begins with the subject (*hercle*) and is closed by a form with verbal function (*sce*) showing the well known *-ce* suffix.<sup>4</sup> It has

<sup>1</sup> Körte, *Etruskische Spiegel*, 5, 60. Although the inscription has frequently been treated, no satisfactory explanation has been found. See Körte, *l. c.*, 74 f.; Torp, *Etruskische Beiträge*, I, 122 ff.; Herbig, *RE*, 8, 687; Buonamici, *Epigrafia Etrusca*, 390 f.

<sup>2</sup> "Hercle," *Études critiques des principaux monuments relatifs à l'Hercule étrusque* (Paris, 1926), 139 f.; 150 ff.; see also Bayet, *Les origines de l'Hercule romain* (Paris 1926), *passim*.

<sup>3</sup> See Herbig and Bayet, *l. c.*

<sup>4</sup> Compare *amce*, *lupuce*, *turuce*, *zinace*, etc. In this paper I follow

been suggested by Torp that the phrase contains the statement: "Hercules was suckled by Juno," and consequently he translates *θra* by "breast of the mother" or "mother"<sup>5</sup> and *sce* by "was suckling."<sup>6</sup> But there is no kind of proof for such a translation. Besides we may assume that the legend to which the picture alludes was familiar to the Etruscans, since it is recorded on other mirrors without inscriptions, not to mention the fact that Hercules was a most popular figure in the myths of Etruria. What we expect to find is not a mere repetition of what the picture has already told us but an explanation of the significance of the action portrayed. Furthermore the fact that the inscription is given a formal position within the representation itself with Jupiter pointing toward it clearly indicates that it adds something to the whole. As a matter of fact the sentence contains such a declaration if we replace *θra* by the reading *θura*. This conjecture seems perfectly justified, for in the later periods of Etruscan (which, broadly speaking, begin about the end of the 5th century B. C.) there exist numerous cases where the liquid stands for *l* or *r* plus an inherent vowel even in initial syllables,<sup>7</sup> e. g. *lrθ* instead of the customary *larθ* or *trce* instead of *turce* "dedit," "dedicavit" on a well-known bronzetto of the Louvre.<sup>8</sup> In our case the spelling probably was caused by the lack of space in the last line, where the words are in fact written closer to each other than in the lines above.

The word *θur(a)* is familiar to Etruscologists as the second member of compound proper names, in which it occurs frequently.<sup>9</sup> One may compare the instances *velθur* : *vel* (praenomina), *velθinaθura-s* : *velθina* (gentile names). We have to assume a patronymic function for *θur(a)* and Wilhelm Schulze defined its meaning as closely related to Greek *-γεντος* or

the custom of translating the *-ce* form by a preterit, although we are not certain that it expresses a tense. See Fiesel, *Etruskisch*, 43 f.

<sup>5</sup> *Beiträge*, I, 25. The Etruscan word for mother we know is *ati*. Therefore this translation seems unlikely.

<sup>6</sup> It is not clear from Torp's arguments whether he translates Hercules "was suckled" or "was suckling."

<sup>7</sup> See Hammarström, *Beiträge zur Geschichte des etrusk. lat. u. griech. Alphabets*, 19 f. and 25.

<sup>8</sup> Fabretti, *CII*, 2614.

<sup>9</sup> The examples are collected by Pauli, *B. B.*, 25, 194 ff.

Germanic "-ing."<sup>10</sup> We may accordingly translate the form *θura* of our inscription, where it occurs as a separate word, by Greek γνήσιος, which implies the sense of Latin "legitimus." Then the remaining word *sce*<sup>11</sup> would correspond to a Greek ἐγένετο, Latin "fiebat," "factus est," and we obtain the interpretation given above: "Hercules became (or "becomes") the born (legitimate) son of Juno."<sup>12</sup>

As to the remaining words, their signification is far less certain. We may, however, try an approximative translation. The words *eca sren* at the beginning present a demonstrative pronoun (*eca* is translated by Latin "hoc") followed no doubt by a noun, a type of phrase most familiar in Etruscan. Compare e. g. *eca subī*, "hoc (est) sepulcrum."<sup>13</sup> The meaning required in our passage for *eca sren* would be something like "here is shown, here is represented," Latin "haec (est) monstratio."<sup>14</sup> Now we have on the Agram text several occurrences of a phrase *cletram šrenxve* (*šrenxve*), in which the second word seems to be etymologically akin to *sren* and may well have a meaning similar to the one proposed above. It has been suggested that *cletram* is identical with the Umbrian *kletram* ("crapulus," "lectica"), and we might well expect to find a word for "bier" in a ritual

<sup>10</sup> *Lateinische Eigennamen*, 341. The possibility of a connection between names in *-θura* and *-tra* (mentioned by Schulze, 342) would receive support from our form *θra* = *θura*.

<sup>11</sup> Perhaps we should read *suce* or *sece* (compare *sec*, *sex*, "daughter") instead of *sce*. But I cannot give evidence as to which of the three is to be preferred.

<sup>12</sup> I prefer this translation to another which, however, must be mentioned. One might assume that we should read *θurasce* "nascebatur." Such a form would have analogies in *ersce*, Fabretti, 2598 (see below); *reusce*, Agram text, XII, 2; *acasce*(?), Gammurrini, Appendice, 799. Quite a number of inscriptions, for reasons not yet known, have words divided by interpunction. In our inscription, however, there is no evidence of such divisions. On the contrary *ixnac*, written as *ix.nac* on the Agram text, forms a continuous word here, which seems to favor the interpretation given above.

<sup>13</sup> *Eca*, occurring more than thirty times, always has a nominative function; nearly all examples belong to the type *eca subī* (an exception is Fabretti, 2598). As I have treated the pronoun more fully in a paper for *Studi Etruschi*, vol. 9, I need not go into detail here.

<sup>14</sup> Torp's translation of *sren* as "picture" seems improbable on account of the above-mentioned function of the inscription within the representation.

text apparently referring to death or the dead. Furthermore *cletram* does not occur in the last columns (10-12), which probably contain the prescriptions for the final ceremonies that followed the *ἐκφορά*. Since *cletram* is always followed by *śrencve*, both words might form the designation for the "lectus funebris." Since the deceased was laid out for several days on an uncovered bier (*πρόθεσις*, "collocatio") before the *ἐκφορά* was performed, *cletram śrencve*<sup>15</sup> may possibly be an expression such as German "Paradebett" and might be translated by a Greek κλίνη ἐπιδεικτική.

The word *tva*, recorded only in this inscription, is probably a conjunction such as Greek *ὅς*, *ὅτε*, Latin "quomodo," "ut," connecting the two sentences.<sup>16</sup>

The remaining *ixnac* is shown to be a noun or a substantivized adjective by its two other occurrences:

- 1) *etnam* *aisna* *iḡnac* *reúšce* *aiseraš* *šeúš*  
 | | | | |  
 adverb (?) "divinus" sub- verbal "deorum" attribute  
 ject form or "dei" to *aiseraš*

Since *aisna* is known to be an adjective, *ixnac* must be a substantive (that it is not a pronoun will be shown below). Similar phrases are *aisna hinθu* (XII, 7; XI, 10; IX, γ 1; "divina anima," according to the convincing translation of Herbig and Rosenberg),<sup>17</sup> *aisna clevanθ* (VII, 11), *aisna pevaχ* (IV, 22).<sup>18</sup>

- 2) In the phrase *ixnac fulinušneš* on the Capua tablet<sup>19</sup>

<sup>18</sup> See Lattes, *Saggi*, and the other literature cited by Goldmann, *Studi Etruschi*, 2, 226, 3. I cannot discuss here Goldmann's own opinion (according to which *cletr-am sre-nve* contains the words *am*, "day," and *naχ*, "night"), since it has no plausible foundation.

<sup>16</sup>Torp translates *tva* by "shows," but there is no need and no grammatical evidence for a verb.

<sup>17</sup> See *Abh. d. Bayr. Akad. d. Wissensch., hist. phil. Kl.*, 25 (1914), 4, 41 f. and *Glotta*, 4, 64 f.

<sup>18</sup> *Vanθ* is a deity of fate and death; *pevaχ* must be an adjective or substantive, since it shows the suffix *-(a)χ*, known from ethnica, titles, and names of deities. I omit some other words with which *aisna* is connected on the Mummy text, as their meaning and the analysis of the sentences to which they belong are doubtful.

<sup>19</sup> The tablet is published with Sittig's new readings by Cortsen in *Studi Etruschi*, 8, 227 f.

(line 5-6) *fulinuśnéś* is apparently a genitive form in -s modifying the preceding word.

*Iχnac* is a compound whose two members *iχ* and *nac* appear also as separate words. As to *iχ* (*iχu*), I agree with Pallottino's opinion, that it is a preposition such as Latin "secundum"<sup>20</sup> or, perhaps better, "in" (see below). This meaning would fit all the occurrences so far as one can judge them. *Nac* and its derivations have had various explanations, among which I cite *nac* "Totenopfer" (Bugge), *nacnva* "sepulchre" (Pauli),<sup>21</sup> for they suggest a connection with death or the dead; and I think that this is of the essence of *nac*, in view of the following passages.

1) *ati nacna, ati nacnva* in the inscription Fabretti, *Suppl.* 1, 436 may well mean "mater defuncta."<sup>22</sup>

2) The phrase in the tomb inscription Fabretti, *Suppl.* 1, 398<sup>23</sup>—*larθiale hulχniesi marcesic caliaθesi . . . nacnvaiaasi . . .*—may be similarly translated by "Larti Holc(o)nio et Marco Galliat(i)o, defunctis."

3) The famous vase from Vulci (Fabretti, 2598) representing the departure of Alcestis for the lower world bears the inscription:

<i>eca</i>	<i>ersce</i>	<i>nac</i>	<i>aχrum</i>	<i>flerθrce</i>
"haec"	verb		"Acheron"	verb (containing the noun stem <i>fler</i> ) <sup>24</sup>

<sup>20</sup> See *Studi Etruschi*, 5, 271.

<sup>21</sup> See *Etruskische Forschungen und Studien*, 4, 9 and *Etruskische Studien*, 3, 122 f. Other explanations that are scarcely convincing have been given by Torp, Cortsen, and Goldman (the last-named citing the literature in *Studi Etruschi*, 2, 224).

<sup>22</sup> *Nac-na* is adjectival; compare *subi-na*, *ais-na*, etc. As to *nacnva*, the function of the ending is doubtful. (Is it a participle such as "mortuus," "defunctus"?)

<sup>23</sup> The inscriptions are quoted in full by Cortsen, *Die Etruskischen Standes- und Beamtentitel*, 81 f.

<sup>24</sup> Compare Herbig's translation in *Hermes*, 51, 473, which is rather unconvincing. See Fiesel, *Namen des griechischen Mythos im Etruskischen*, 69. Herbig's definition of *fleres* as "Bronze(bild)," "statue," which he bases on the observation that the word is said to occur only on statues, is rendered unlikely by the fact that *flere* forms the inscription of a stone tablet: see *Not. d. Sc.*, 1892, 473 f. Herbig does not

Here a meaning "dead" or "death" seems to be suggested by the scene represented and by the name *Acheron*.<sup>25</sup>

4) The inscriptions from Vetulonia (*CIE*, 5213) and *Magliano* (5237 B) close with the phrases *apers naχs*, *afrs nace. s.* I have a strong suspicion that *aper* forms the plural of the word *apa*, for which a meaning "pater" or "maior" seems probable.<sup>26</sup> In this case we might translate "maiorum (patrum) decessorum," a quotation likely to be found at the end of Etruscan tomb or ritual inscriptions.<sup>27</sup>

Obviously a signification νεκρός, "mortuus" or "mors,"<sup>28</sup> would fit all the passages quoted above.<sup>29</sup> For *ixnac* on the mirror, then, a meaning such as "mortalis"<sup>30</sup> seems to be suggested both by the legend represented and by the content of the inscription. Grammatically we may compare with it such compounds as Greek επιθανάτιος, επιθάνατος, έννομος,<sup>31</sup> and so on. This meaning

cite this monument. *Flere-e* is more likely to mean something like "votum," "votivum," "sacrum."

<sup>25</sup> The phrase *eca ersce nac* might contain a meaning such as ἦδε ἀποίχεται θανοῦσα, βέβηκε θανάσιμη, a conception familiar in the *Alkestis* of Euripides. (This would fit Giglioli's assumption that the picture represents a scene of some tragedy and that the sentence formed a quotation: see *Studi Etruschi*, 4, 367.) This, of course, is merely a suggestion.

<sup>26</sup> A discussion of this word would lead too far afield. I was glad to find the same suggestion that *apa* = "father," in Leifer, *Studien zum antiken Ämterwesen*, 230, 3 and 247.

<sup>27</sup> Compare Hittite "akanteš," "the dead," and also "Di manes." See Hrozný, *Bogh. Stud.*, 3, 139, note 7; Sommer, *Bogh. Stud.*, 10, who quotes related expressions from Sanskrit and Greek. See also Sommer, *Ahhijavā-Urkunden*, 122.

<sup>28</sup> I do not mean to hold that the primary meaning of *nac* must be "dead" or "death"; this meaning is frequently secondary, as in Greek τελευτᾶν, ἐκλείπειν, Latin "obire," "defungi," German "entschlafen," "Leichnam." On the other hand compare the double meaning of Greek σῶμα, Latin "corpus"; or Latin "funus," "funeral," "death," "decay," "corpse."

<sup>29</sup> The other passages give no clear evidence. The places where the stem occurs are collected by Goldmann, *Studi Etruschi*, 2, 218 ff. As for *enac*, *enax*, this may well be a different word. Compare *enas*, *enesci*.

<sup>30</sup> Or "post mortem" (?). But see below. "Immortalis" can be omitted on account of the meaning of *ix(u)*.

<sup>31</sup> With έννομος might possibly be compared *ixutevr* on the *Magliano* inscription, "secundum ius" (?). I shall treat the word elsewhere.

would also fit in the Agram text, where *aisna iχnac* and *aisna hinθu* occur in the same column, the last one of the ritual. "Divinus mortalis," then, would correspond to "divina anima" and this makes good sense, especially if we assume that *iχnac* might imply a more general meaning like Greek *βροτός*, Armenian "mard," German "Sterblicher."<sup>32</sup> Thus the translation of the whole inscription would be: "here is shown how the mortal Hercules became the legitimate son of Juno."

It may be worth while to remark in passing that our inscription can easily be arranged as a trochaic septenarius as follows:

*éca srén tva iχnac hércle úniál clan θúra sce.*

Since our knowledge of Etruscan syllabification is very imperfect, it is quite possible that several of these "feet" were pronounced with three syllables.

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<sup>32</sup> As to the idea of "divus mortalis (homo)," compare Cicero, *De Leg.*, 2, 22 ("lex"): "Deorum Manium iura sancta sunt. Bonos leto datos divos habento"; Augustinus, *Civ. Dei*, 8, 26: "Varro dicit omnes ab eis mortuos existimari manes deos"; Vergil, *Aen.*, 5, 47: "divinique ossa parentis."

P. S.—M. Runes, *Der etruskische Text der Agramer Mumienbinde*, reached me too late to be utilized in this article.

# ON AMMIANUS MARCELLINUS, *xxiii. 3. 9.*

In *Classical Philology*, *xxiii*, pp. 60 ff. the writer called attention to some uses of *alius* which, although fairly frequent in Latin and, with words of similar meanings, also in other languages, both ancient and modern, seemed to have received scant notice.<sup>1</sup> That this usage may sometimes affect textual emendation is suggested by *Amm. xxiii. 3. 9.* There Clark's text has "commeatus abunde ferentes, et tela, et obsidionales machinas†," where the end of the sentence is marked as corrupt, presumably *cursus causa*. It is very likely superfluous to say that the rhythmic prose of Ammianus is based on accent, not on quantity, and that in his *clausulae* two or four unaccented syllables are put between two accented syllables, never one or three. This rule has certain limitations and qualifications, which are set forth briefly by Clark in the Preface to vol. i of his edition (Berlin, 1910) and more fully by Harmon in *Trans. Conn. Acad. of Arts and Sciences*, *xvi* (1910), pp. 117 ff.

No one seems to have attempted to remedy the *cursus* in the passage referred to, but it may readily be done by writing "obsidionales álias máquinas," thus making a *cursus tardus*. Ammianus has at least two examples of this use of *alius* which seem certain. In *xxv. 10. 8*, "his ita tristibus, laetum aliud addebatur" clearly does not mean "to these sad messages was added another happy one," but "to these sad messages was added another, this time a happy one." Again, in *xviii. 8. 7*, "aliam cataphractorum multitudinem," the *cataphracti* are horsemen who, as well as their horses, are completely clad in heavy armor; they are called *cataphracti equites* and *clibanarii* in *xvi. 10. 8*, where their armor is described (cf. also *xxiv. 4. 15*; *xxiv. 6. 8*; *xxv. 1. 12*), and *cataphractarii* in *xvi. 2. 5*.<sup>2</sup> The edition of

<sup>1</sup> What was said of Hadrian's Wall, which seemed, and still seems, sound in the light of the evidence available at the time, has been shown by later explorations to be in part erroneous. That however does not affect in any way the interpretation of *alius* in *Jul. Capit., vit. Ant. Pii*, v. 4 and the notes relating to it.

<sup>2</sup> A Sarmatian cataphract is depicted on the column of Trajan. This kind of cavalry seems to have originated with the Persians and Parthians, but was adopted by the Romans (*xvi. 2. 5* and *12. 63*), and as the names indicate, by the Greeks as well, for Ammianus is clearly

Wagner and Erfurdt (Leipzig, 1808) seems unquestionably right in regarding these three terms as synonyms (Index II, s. v. *cataphractarii*); but if, as some of the translators seem to imply, the *cataphracti* were somewhat less heavily armed than the *cataphractarii*, it does not affect the argument. The force with which *multitudinem* is contrasted consisted of nearly 20,000 Persians, described as *armata* (xviii. 8. 3). Its number alone makes it improbable that it consisted wholly of mail-clad cavalry, and in fact in the next section Ammianus says that it was *equitatu et numero praevalente*. Moreover, some of them were armed with bows and arrows (xviii. 8. 11). It seems natural to translate: "another large force, made up of mail-clad horsemen."

Some other examples are less certain. In xix. 9. 2 we read: "numerarii apparitores magistri equitum aliique protectores." It is at least doubtful whether Ammianus, who was himself a member of the select corps of *protectores*, who ranked as *clarissimi*, would link them with *numerarii apparitores*, who are defined by Wagner-Erfurdt (Index II, s. v. *numerarii*) as *rationarii*, and s. v. *adparitores* as "scribae, rationales, ianitores, nuncii (*sic*)."<sup>3</sup> An examination of various passages will show that it is no argument against this rendering that *aliique protectores* is not separated by the *cursus* from *apparitores*, as *obsidionales machinas* is from *tela*; but it is at best a conjecture. "Camelis, aliisque iumentis" (xxv. 8. 6) suggests Livy's "plaustra aliaque iumenta,"<sup>3</sup> and Ammianus was a diligent reader and imitator of Livy. *Iumenta* is commonly used of horses, asses, and mules. It is contrasted with *elephanti* by Livy, xxi. 37. 3, but rather for the difficulty of transporting the elephants than for any other reason. That the food supply to which Ammianus refers is mentioned as "iumentorum caro caesorum" in xxv. 8. 15 does not seem especially significant, but in any case the example must be classed as doubtful; indeed, if Sextus Caecilius is right (ap. Gell. xx. 1. 28) in his assertion that *iumentum* might mean a vehicle drawn by yoked animals,

wrong in saying "quos clibanarios dictitant" in xvi. 10. 8, if as seems certain, he refers to the Persians. Both words are of Greek origin (*κατάφρακτος* and *κλίβανον*; Wagner suggests *καλύβη*).

<sup>3</sup> Livy, iv. 41. 8. For this and other examples of this use of *alius*, see the note in *Class. Phil.* xxiii, pp. 60 ff.

the example from Livy might be questioned; but the usage of which Caecilius speaks, if it is accepted, was doubtless obsolete in Livy's time, as it was in that of Gellius; and if it were not obsolete, it would hardly have occurred to Livy to use the word in that sense. So far as I know, that rendering has not been adopted in the passage of the *Twelve Tables* (i. 1. 3) to which Caecilius applies it.

The opposite usage, of omitting an *alius* required by the sense, is much more common in Latin of all periods. It occurs several times in Ammianus; for example in xvi. 10. 12, "ut fecere principes consecrati," "as other anointed princes did."<sup>4</sup>

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<sup>4</sup> *Consecrati principes* is used of deified emperors in Suet. *Calig.* 35. 3.

# OLD ENGLISH SEDULIUS GLOSSES.

Bound with the Anglo-Saxon Chronicle in MS 173 at Corpus Christi College Library, Cambridge, is a Sedulius manuscript of the 8th-9th century which contains a large number of Old English glosses. Some sixty of these are in ink; there were probably a good many more in ink at one time, as now the first part shows numerous erasures of glosses. In addition to the inked glosses, however, the Sedulius section contains some four hundred legible scratched glosses.<sup>1</sup> For several weeks in the winter of 1933 and again for several weeks that spring I worked on the scratched glosses in this manuscript.<sup>2</sup> While many of these glosses are quite clear, to read all that are possibly legible is a matter of much patience. Some of the scratched glosses occur in the erasures of inked glosses, a fact which leads me to believe that perhaps they were put in at the time when the inked ones were erased.<sup>3</sup> In a good many of the glosses only the consonants are written, the omitted vowels being indicated by a horizontal scratch usually over the preceding or following consonant. For such abbreviations I have endeavored to give correctly the complete gloss in the footnotes.<sup>4</sup>

EPISTOLA AD MACEDONIUM		MIGNE, PATROL. LAT. XIX	
57r lyntre scipe	535, 2	obtunsi ° forslegenre	16
expurgem ic ġclænsie	3	uenas æder	17
indoluit ġhrew	15	permanere þurhwunian	
sentes gorstas	18		537, 1
dumos ° þŕn(as)	18	57v tenacitate fsthafulnesse °	2
tractari b(eo)n ġsægde		ambages twion	8
	536, 9	laccessitus ġmþgu(d) °	12
quiddam hwęthwugu	13	metuam ic frhtig °	13

<sup>1</sup> Concerning scratched glosses, see my articles "Old English Scratched Glosses in Cotton MS. Tiberius C. ii," *A. J. P.*, LIV, pp. 305 ff., and "Old High German Scratched Glosses," *A. J. P.*, LV, p. 227.

<sup>2</sup> This work was made possible for me by a research fellowship with the American Council of Learned Societies.

<sup>3</sup> The glosses in ink seem to me to be of the late tenth or early eleventh century. They are put in by at least three different hands.

<sup>4</sup> In some cases where the solution of an abbreviation is obvious I have not mentioned it in a note, nor have I mentioned each time the prefix *ġ* for *ge* and *ū* for *um*. Old English words not found in the dictionaries (Bosworth-Toller and Hall) I have marked in the footnotes with an asterisk by the reference number.

5. Ed. *dumosi*. The gloss is *þornas*. 6. Ed. *obtusi*. 7. *fæsthafulnesse*. The glossator probably scratched a mark over the first *s*, although I now find no trace of it. 8. *gemeþgud*. 9. *forhtige*. 10. *gehealdap*.

procluioris tohaldra	15	58r dimicare wīnan <sup>14</sup>	12
expedire areccan	538, 2	perlegendi þurredenne <sup>15</sup>	13
et reponant 7 ġhīdaþ <sup>10</sup>	13	patrimonii erf(es)	541, 3
repudiandos to frsacenne <sup>11</sup>		annosam ġwintrā <sup>16</sup>	12
	14	iunenilem ġiguplice	14
tractandos (to) smeagñe <sup>12</sup>		senectam ielde	14
	15	quam swiþe	542, 1
probabili ġsededlice <sup>13</sup>		indolis ġbyrde	5
	539, 5	eximio healicū	9
impertias þu ġdele	8		

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## MIGNE, PATROL. LAT. XIX

59r conuiuia ġbr <sup>17</sup>	549, 1	conlucent somed scinaþ	
quicumque swa hwelc swa			552, 1
þu <sup>18</sup>	1	paupere ermun	2
dapes symblu	1	appositum toġseted	3
dignatus gemedamad <sup>19</sup>	2	olus wīt <sup>24</sup>	3
accubitare hlinian †		grandisonis swiðswoge	
sittan, onhīd <sup>20</sup>	2		553, 2
toris ræstū	2	pompere glengn <sup>25</sup>	2
pone alege <sup>21</sup>	3	tragico buclice <sup>26</sup>	2
adi ġsec	550, 1	boatu ġhlowe <sup>27</sup>	2
sollemnia merthu <sup>22</sup>	1	ridiculo bismere	3
libens lustbere <sup>22</sup>	2	monimenta mādgunġ <sup>28</sup>	
si ġif <sup>22</sup>	3		554, 2
caperis thu bist etwue-		rituque 7 þm rihte, <sup>29</sup>	
nied <sup>22</sup>	3	gewuna	2
uescere ġreordan	5	magistro larewlice <sup>30</sup>	2
cenis ġreordū	5	biblis boccestū <sup>31</sup>	3
creat cennþ	551, 3	assuetus gewunad <sup>32</sup>	555, 1
astra tnglu <sup>23</sup>	3	uerenter arwurþlice	2
		59v iure andwīd <sup>33</sup>	8
		consors euēlic <sup>34</sup>	556, 3

11. *forsacenne*. 12. *smeagenne*. 13.\* Read *geseðedlice*; cf. *geseðed*: *probata*, Bosworth-Toller, p. 440 under *geséðan*. 14. *winnan*. 15.\* cf. *oferrædan*: *perlegere*, BT., p. 736. 16. *gewintrad*. 17. *gebeor*. 18. Gloss in left margin. *þu* renders the pronoun of the second person implied in the following Latin verb *requiris*. 19. In ink. 20. The last gloss, for *onhīdan*, is scratched beneath the lemma. 21. In ink. Above *pone* is written *de*, so the gloss may render *depone*. 22. In ink. 23. *tunglu*. 24. *wyrt*. 25. *glengan*. 26.\* Probably for *buccallice*, a literal rendering of *tragico* as 'bucklelike'. 27. Above the lemma there is also visible *ge* in ink. 28. *myndgunge*. 29. 7 *þæm rihte*. Second gloss in ink on right margin. 30. In ink in r. margin. 31. The lemma was misunderstood by the glossator, who seems to have taken it as *bibliothecis*. In the context *niliacis biblis* means 'paper'. 32. In ink in r. margin. 33. *andweald*. 34. *euenlic*. In ink.

letale daed <sup>35</sup>	8	discrimina orle <sup>54</sup>	5
serpit ꝥsniceþ <sup>36</sup>	9	frondea þa þudbæran <sup>55</sup>	566, 5
humus lnd <sup>37</sup>	558, 3	chelydros wterndre <sup>56</sup>	567, 1
liuida lælte	4	uirgulta teleran <sup>57</sup>	2
tartareis hlle <sup>38</sup>	5	peruia þrffe <sup>58</sup>	3
amoena wynsume <sup>39</sup>	5	pedistris fþemannū <sup>59</sup>	5
virecta spryttince <sup>39</sup>	5	mare wæge	6
nemorum wonga <sup>40</sup>	6	incederet iġfille <sup>60</sup>	568, 4
latices burnan, wateru <sup>41</sup>	7	aruis lndū <sup>61</sup>	4
animantur gelifeste <sup>42</sup>	8	planis smeðū	4
orra berna <sup>43</sup>	559, 2	referam, narram secg	5
60r vellere fleose	561, 5	dapes, epule swetmt(s) <sup>62</sup>	8
ritu rihte <sup>44</sup>	8	ieuna <sup>63</sup> þa fæstend	569, 4
iusu <sup>45</sup> hæse	9	marmora .i. rupes l lapides	
mediis middewardū	10	stanas	4
pruinis frstū <sup>46</sup>	10	61r dilato gelandū ġieldū <sup>64</sup>	570, 1
currere ġhlpan <sup>47</sup>	562, 1	uespere æuenne <sup>65</sup>	1
mustum read win	1	rostro nebbe	9
uinitor winwring <sup>48</sup>	3	orbita .i. rota hwiogl	571, 6
ora mþs <sup>49</sup>	563, 1	in ortum l setgng <sup>66</sup>	572, 7
expediet arecet <sup>50</sup>	3	uastum widan	11
bibulae drincendan	4	aequor watru	11
uiro fr(o)st <sup>-</sup>	564, 2	remige ġrope <sup>67</sup>	573, 1
gelidi caldan	2		
algentes þ calndan <sup>51</sup>	4		
60v occumberet ġhlin(a)de <sup>52</sup>	565, 1		
uitans bŕgende <sup>53</sup>	5		

35. For *deadlic*? 36.\* In the dictionaries not documented with prefix *ge*. 37. *lond*. 38. *helle*. 39. In ink. 40. The gloss is above the preceding *florentum*. 41. *burnan* occurs twice, once scratched and once in ink. 42. In ink; p. p. of *geliffæstan*. 43. In ink. 44. *rihte*. 45. Ed. *jussu*. Gloss in ink. 46. *forstum*. 47. *gehleapan*. 48. *winwringe*; the glossator has misunderstood the lemma, which would be rightly rendered by *winwircend*; cf. *uinwircendum: uinitoribus*, BT., p. 1237 under *winwyrceñd*. 49. *mupas*. 50. Gloss in margin at right. 51. *þa calendan*. 52. This gloss is immediately preceded by one now illegible. 53. *beorgende*. 54. The gloss is illegible at the end; cf. *discrimina: orleahtras*, OEG., 1867. 55. In ink. Read *þufbæran*; cf. *frondentes pini: þufbæres pintreowes*, OEG., 2222. 56. *wæternædre*. 57. In ink. 58. *þurhfere*. 59. *fepemannum*. 60. *ingefealle*; the lemma seems to have been taken as *incederet*; cf. *ingefeallan: incidere* in Hall's *Dictionary*. 61. *londum*. 62. *swetmetas*. 63. Ed. *jejuna*. 64. First gloss in ink, p. p. of *gelangian*; *langian* 'lengthen' is not given in the dictionaries with prefix *ge*. 65. In ink. 66. *in setgange*. The glossator confused the lemma with *occassu* in the line above. 67. Possibly for *gereþre*; cf. *remex: roeðra*, WW., 43, 25. 68. *godgild*.

sacra .i. idola	godgld <sup>68</sup>	2	actis	ġnddū <sup>83</sup>	12
chaldea	þæt caldisce <sup>69</sup>	4	ardua . . culmina	tha hean	
exitium	deað	4	rofa <sup>84</sup>		581, 1
61v restincta	gesa <sup>70</sup>	574, 1	focis	fyrū	2
uachors .i. demens	wd <sup>71</sup>		dapibus	swetmettū	2
		3	uenerantur (olus)		
agrestes	fellice <sup>72</sup>	4	hrggldap <sup>85</sup>		3
herbas	gresu <sup>73</sup>	4	numina	ġwld <sup>86</sup>	4
pecodum	neata	4	pudet	semþ <sup>87</sup>	6
per	geand <sup>74</sup>	4	nefas	unriht <sup>88</sup>	7
aulica	þa hellelican <sup>75</sup>	5	carduus	þisþel	582, 1
depasto	fretenū	5	paliurus, herba spinosa		
decernitur	ġdemed	575, 2	fyres <sup>89</sup>		1
feris	wldrū <sup>76</sup>	3	fuluis	glw <sup>90</sup>	6
sanctos	hlġn <sup>77</sup>	4	peruia	þrhfre <sup>91</sup>	583, 1
talia .i. facta	ġwrt <sup>78</sup>	8	62v actu	nide <sup>92</sup>	6
toties	oft	9	socia	ġfrn <sup>93</sup>	584, 1
ab imo	fram innewrdū <sup>79</sup>		rudis .i. nouo	niwū	2
		576, 5	curua	crymbā	585, 2
aequis	hors	9	auia	unġferan	2
nempe, quippe	þonne <sup>80</sup>		remansit	he belaf <sup>94</sup>	6
		577, 4	parentis	hlafrdes	7
machina	ġwrc	5	qui	sege <sup>95</sup>	7
uana	weos <sup>81</sup>	578, 1	similauit	hanlicede <sup>96</sup>	
sinistro, peruerso	wirsan	1			585, 8
62r uerentur	onscunap	3	natum .i. filium	cild	9
dementia	ġdwes	4	ipse	seolfsefe <sup>97</sup>	10
sacris .i. idolis, secretis <sup>82</sup>			progenies	genyrdnes <sup>98</sup>	13
.i. gerynū		580, 2	auī	eldran	13
censum	ġscrif	9	clarus	mere <sup>99</sup>	586, 5
caesa	ġheawene	12	sic	thus <sup>99</sup>	587, 1
			quamquam	thēh <sup>99</sup>	5

69.\* *þæt caldisce*; the gloss is not documented elsewhere. 70. In ink; for *gesah*. 71. *wod*. 72. In ink. 73. The gloss follows *fellice* above *agrestes*. 74. In ink. 75. *heallelican*. 76. *wildeorum*. 77. *halgan*. 78. *geworht*. 79. Gloss beneath the lemma; *inneweardum*. 80. In ink. 81. The lemma was taken by the glossator as *fana*. 82. The last Latin gloss, as well as the OE. one, is scratched. 83. *genededum*. 84. In ink in right margin. A final *s* may have been clipped at the margin. 85. For *hearge gildap*? 86. *geweald*. 87. *sceamap*. 88. *unriht*. 89. In ink. 90. *geolwe*. 91. *þurhfere*. 92. *nide*. 93. *geferan*. 94. In ink. 95. In ink; for *se þe*? 96. In ink; for *he anlicede* or possibly *anlicede* with prothetic *h*. 97. In ink. I believe that this should be read *seolfselfe*, undocumented in Old English, but compare OHG. *selbselbo*: *idem ipse*. 98. In ink; for *gecnryrdnes*. 99. In ink. 100. In ink; for *mislice*. 101. *onfuhton*. 102. *abarede*.

uarias misli <sup>100</sup>	6	nubila gāpu <sup>118</sup>	602, 2
inpugnant onfhton <sup>101</sup>	7	insano unhire	603, 3
exerta aþrde <sup>102</sup>	588, 1	64v devia unġfera	606, 5
cati gleawe <sup>103</sup>	2	comperit .i. sensit afnd <sup>119</sup>	607, 2
rite þwlice <sup>104</sup>	7	mandit ætt	7
in ardua i þa wiþrdynā	8	pecus scep	608, 1
63r herilis sō hlfdlice <sup>105</sup>	589, 3	atrox grāma <sup>120</sup>	5
geruntur brene <sup>106</sup>	7	secuit snāþ	609, 3
resto hindr ġstonde	9	natum cld <sup>121</sup>	5
iuuenci steores	591, 4	uastum wid i rum	8
latum rān <sup>107</sup>	7	emeritus (c)oren <sup>122</sup>	610, 9
duodenus XII fld	8	uolitans þs flġnda <sup>123</sup>	611, 1
apex price	592, 1	usus brucāde	2
deflemus wiopan	5	iuuenta tyde	2
letum, mortem dþ <sup>108</sup>	593, 3	65r uada ffdas <sup>124</sup>	613, 4
pro dolor, heu wā þt is		torrentum buf <sup>125</sup>	4
sarlic <sup>109</sup>	9	liquentes þa wtrendan <sup>126</sup>	6
63v inreparabilis		fluminei ealice <sup>127</sup>	615, 1
unġniwiendlic <sup>110</sup>	594, 6	incedere frn <sup>128</sup>	5
reducem geanwyrfedē <sup>111</sup>	9	aristis eglū	617, 6
opem speede <sup>112</sup>	9	creat cāþ <sup>129</sup>	7
terigine <sup>113</sup> tudr	595, 1	labefactus slidā	9
ne factura n ġwrt <sup>114</sup>	3	feres þ bres <sup>130</sup>	618, 1
placatus ġþngad <sup>115</sup>	8	65v adfectaret ġlstfflde <sup>131</sup>	3
posset mehte <sup>116</sup>	596, 6	monstrumque nefandum	
uterumque æghwþrne <sup>117</sup>	9	7 þt ūrhte sciñ <sup>132</sup>	4
feta ġbrendan	597, 5	congresibus ġsht., <sup>133</sup>	619, 1
64r ignaris ungewissum <sup>117</sup>		subuctus gonges	9
	600, 3	conlidere oþspornan	620, 1
pastoribus hyrd(um) <sup>117</sup>	3	in praeceps i fel <sup>134</sup>	5
orientis ab axe frā þre		curuauit <sup>135</sup> ġlacnade	6
e(ast)	601, 4		

103. In ink. 104. *þeawlice*. 105. *seo hlafordlice*. 106. *borene*.  
 107. *ruman*. 108. *deap*. 109. Cf. the citation in BT. under *wā* from  
 Bede's *History*: *heu, proh dolor: wā lā wā þæt is sārlic*. 110.\* Ad-  
 jective formed from pres. ptc. of *genioian*. 111. In ink in margin.  
 112. Ed. *terrigenae*. 113. *ne geworht*. 114. *geþngad*. 115. In ink.  
 116. The glossator mistook the lemma for *utrumque*. 117. In ink.  
 118. *genipu*. 119. *afand*. 120. *grimma*. 121. *cild*. 122. Cf.  
*emeritos*: *þa gecorenan*, WW., 398, 22. 123. *þes fleogenda*. 124. *fordas*.  
 125. For *burnan*. 126. *wætrendan*. 127.\* Analogous to Aelfric's  
*streamlicum* cited in BT., p. 927. 128. *farān*. 129. *cenþ*. 130. *þu*  
*bires*. 131. *gelustfullode*. 132. *7 þæt unrihte scinn*. 133. *geslyhtum*.  
 134. Cf. in *preceps*: *on færþyll*, WW., 426, 7. 135. The glossator mis-

confossus þrhetn <sup>136</sup>	9	non nato unacen(d)um	
cuspidē palette <sup>137</sup>	9		634, 2
proceres hlafds <sup>138</sup>	621, 2	lacus <sup>152</sup> seaþas	3
tranant ofspyr <sup>139</sup>	7	inocciduas i ða flls <sup>153</sup>	
66r monumenta mūgñe <sup>140</sup>			635, 1
	624, 2	regulus ġrefa	2
degenerent adwoledn <sup>141</sup>	4	67r uiseret neoðde	3
annuat ġþaifþ	625, 2	imperi cynedō	9
iamque 7 emne	4	uicturus eftlifgn <sup>154</sup>	636, 1
succedent æfterflgþ <sup>142</sup>	6	opida hñcse <sup>155</sup>	5
nefas unrht	626, 5	rura flds <sup>156</sup>	5
hydrus wtrndre <sup>143</sup>	627, 1	cassas hus	5
redundans yðgiende	2	castela wic	5
annonam dægmete <sup>144</sup>	5	miser ear(m)	9
cautio þis is ur scipe	629, 1	socrum swegrū <sup>157</sup>	637, 4
66v senserit ancawieþ	6	letale dædlicre <sup>158</sup>	6
tortoribus þres <sup>145</sup>	630, 1	rabidas wðne <sup>159</sup>	10
abire þonñ <sup>146</sup>	2	aequoreas aquas þa sæ	
non quia na þet	4		638, 8
agit <sup>147</sup> ñde, gelede	631, 1	placido lþre	9
artum ġfstnedan <sup>148</sup>	6	carbassa blæstas <sup>160</sup>	9
tenuis smeale	7	ratis fleot	639, 1
hic þes	10	flabris blæ(st)	1
sidera tunga <sup>149</sup>	632, 1	acta gñded <sup>161</sup>	1
dissociata todledu <sup>150</sup>	4	secura gñleasa <sup>162</sup>	2
iter þet fare	5	carinam bñd <sup>163</sup>	4
conspicuos þa gsñn <sup>151</sup>	6	uada yþe	4

took the lemma for *curauit*. 136. *þurheten*. 137. Read *palestre*. 138. *hlafordas*. 139. *oferspyraþ*. The verb *spyrian* in composition with *ofer* is not in the dictionaries; cf. *ubarswimman*: *tranare*, Graff's *Althochdeutscher Sprachschatz*, 6, 878. 140. Possibly *myngune* for *myndgunge*. 141.\* *dwolian* is not given in the dictionaries with prefix *a*. 142. *æfterfylgaþ*. 143. *wæternædre*. 144. Above the gloss is *panem cotidianum*. *dægmete* here seems to have the more general meaning 'daily bread' rather than the specific meaning 'breakfast', 'dinner' given in Hall's *Dictionary*. 145. This incomplete gloss is possibly a part of *þræstung* 'torment'. 146. *þonan*, rendering merely the prefix *ab* of the lemma. 147. Ed. *agat*. First gloss *ñide*, second gloss in left margin. 148. *gefæstnedan*. 149. Read *tungla*. 150. *to-dæledu*. 151. *gesynan*. 152. In the context *lacus* means 'jugs'. 153. *in ða fyllas*. The lemma was taken by the glossator as two words. 154.\* *eftlifgan*. 155. I cannot explain this gloss, unless it be for a *heahceastre*, similar to *heahburg* and *heahfæsten*. 156. *feldas*. 157. The ending of the gloss is attracted to the ending of the lemma. 158. Read *deadlicre*. 159. *wodne*. 160. Apparently the glossator misunderstood the lemma. 161. *genyded*. 162. *gymeleasa*. 163. *bord*. 164. The

	naufraga þa sciplican <sup>164</sup>	6	conspicuam sw(u)tol	
	litoreis wroð <sup>165</sup>	6		653, 1
67v	prorsus allinga	9	artes creft	654, 1
	quies rst <sup>166</sup>	10	liuidus læl(d)	3
	citōs hrædlice	640, 1	uirus ater	5
	moratus eldende	2	progressus forþgan	5
	pugnax flitend <sup>167</sup>	5	contracta ggrapudū	655, 4
	agitabant anstyr	7	senio fraldnāg <sup>180</sup>	5
	exiliens asþ.gnde <sup>168</sup>	8	69r iuges single	7
	imum grūd <sup>169</sup>	8	ablata anweg, anweg	
	fretum brimn	9	alædde	657, 5
	lue cwilde	642, 2	uorantibus fretendū	6
	atque olido 7 on		puplicanus se cyninġs	
	flstincendū <sup>170</sup>	3	grefa <sup>181</sup>	—
	dilatus <sup>171</sup> brungn	643, 1	salum saeltn <sup>182</sup>	12
	diserta frlæt	8	uasti þæs wdñ <sup>183</sup>	658, 4
	ademptis gwnð <sup>172</sup>	644, 1	fluentis stream	4
	grabatum bfe <sup>173</sup>	3	marmora sæs	5
	uectorem wgñd <sup>174</sup>	7	nauigeras scipbernde <sup>184</sup>	7
68r	ademit gwanede	645, 6	portus hþ <sup>185</sup>	11
	patulas giniendn	646, 10	uiator wgfrnd <sup>186</sup>	11
	uentum bcumen	647, 2	soli fldñ <sup>187</sup>	13
	tibicines pipefs	648, 1	iugem singale	659, 3
	sopor slþ <sup>175</sup>	3	69v sagaci gleaw	9
	obstipuerē awndrodo(n) <sup>176</sup>	8	gramine cwicn	660, 3
		8	uescier bion grrfdad <sup>188</sup>	3
	decute afth <sup>177</sup>	649, 4	passim wlhwr <sup>189</sup>	5
68v	gratis unepuñg <sup>178</sup>	651, 6	priscum errn <sup>190</sup>	8
	committo bfæste	8	organa tugas <sup>191</sup>	9
	propriōs andlican	9	caespitē trf <sup>192</sup>	661, 1
	edidit ašte <sup>179</sup>	11	uirum wera	8

glossator misunderstood the lemma, though he got the *nau* correctly. 165. *waroð*. 166. *rest*. 167. *feohtend*. Some illegible scratched letters follow immediately. 168. *aspringende*. 169. *grund*. 170. *fulstincendum*. 171. Ed. *delatus*. 172. *gewaned*. 173. *bære*. 174.\* Cf. *hic vector: a berer*, WW., 697, 18. It is likely that the abbreviation is for *wegend* 'a bearer', elsewhere undocumented, from *wegan* 'to bear', and analogous to *berend* 'a bearer'. 175. *slæp*. 176. *awundrodon*. 177. *afleah*. 178. *unceapunga*. 179. *asette*. 180.\* *foraldung*; cf. *forealdian* 'to grow old'. 181. In upper margin. I find no connection for it in the context. 182. The glossator seems to have confused *salum* 'sea' with *sal* 'salt'. 183. *widan*. 184.\* *scipberende*; cf. *nauigeros: þa scipliðendan*, WW., 455, 16. 185. *hyþ*. 186. *wegferend*. 187. *foldan*. 188. *gereordad*. 189. *welhwær*. 190. *ærran?* 191.\* The word appears to be related to OE. *teog* in *sulhgeteog*, OHG. *gaziug* 'implement'. 192. *tyrf*. 193. The lemma was probably mis-

occassu inting <sup>193</sup>	662, 6	truncus stofn	676, 5
modio mittan	8	ustis ðsengdū	5
lichnus lhtft <sup>194</sup>	9	amoenae fægrū	6
amplo rume	663, 1	libana libanisca <sup>206</sup>	7
ore muþ(e)	4	cedrus cedr	7
tegmīne wriglse	5	uertice ufewardum	8
70r adoratam ġwrbade <sup>195</sup>		herilem hlafrdlīce	9
	665, 4	modicum on ltlū,	
predo ġrġre <sup>196</sup>	667, 1	hwilstyce <sup>207</sup>	679, 4
(in ira) tollitur swogen	3	gurgite yþe	5
correpta ġþreatadan	4	proteruo fceleasre <sup>208</sup>	9
soluere gldū <sup>197</sup>	9	71v qui hwa	11
dimissa <sup>198</sup> obdune onsendū		sis (þu) eart	11
	668, 9	reticere swigū	680, 5
resupina upweard	669, 4	pandere opeñ	6
uergens hwerfū	6	testem ġwitan	6
70v revoluam onfalde	670, 7	nefandē unrh <sup>209</sup>	9
defossum ðdolfū	673, 7	transgressus offrgnde <sup>210</sup>	13
conlata brunġ	674, 2	legens lesende	681, 1
damnis fr þam wanungū	3	penetralibus þyrelu	4
auras wederu	8	fores dur	5
71r moenia wħs <sup>199</sup>	675, 4	caelestia þing <sup>211</sup>	10
uicina geednese <sup>200</sup>	7	reserat anlec	682, 1
eadem þa ilca <sup>201</sup>	7	parumper hwon	2
tecta þecene <sup>201</sup>	8	in alno <sup>212</sup> in scipe	3
frondea ġtlg <sup>202</sup>	10	ab equore frā þa wate <sup>213</sup>	4
robore stofne, tlg <sup>203</sup>	10	aquosis gentibus water-	
stipe foge <sup>204</sup>	11	leode <sup>214</sup>	683, 1
comis wyrtwln <sup>205</sup>	12	immanes unġmet	2

taken for *occasio*. 194. *leohtfæt*. 195. *gewurpade*. 196. I can not solve this abbreviation from any documented OE. word. It may represent an OE. *hergere* 'plunderer'; cf. *praedat: hergaþ*, WW., 233, 12 and the OHG. gloss *praedones: heriara*, Graff, *Sprachschatz*, 4, 987. 197. *gyldan*. 198. Ed. *demissa*. 199. *weallas*. 200. In ink. The lemma is broken at the end of a line; *ge* stands above *uici* and *ednese* above *na*. The gloss is not clear to me. It seems to be *ge* and *ednese* (*eadnese*) 'joy', but this has no bearing on the lemma. 201. In ink. 202. *getelga?* 203. First gloss in ink, second for *telg(an)*. 204. In ink. The MS has *stipe* wrongly for *stipite*. In glossing *stipe* by *foge* 'joining' the glossator seems to have had in mind *stipare* 'to put closely together'; cf. OHG. *kafocandi: adstipulatus*, Graff, *Sprachschatz*, 3, 422. 205. *wyrtwalan*. 206.\* An adjective formed from the Latin proper name *Libanus*, like *Grecisc*, *Saracenisc*. 207. on *lytlum*. 208. *receleasre*. 209. *unriht*. 210. *ofergande*. 211. The gloss is explained by the fact that the lemma means 'celestial things'. 212. Above the MS reading *simonis in alno* is scratched *in alno simonis*. 213. Probably for *watre*. 214.\* The lemma refers to fish of the sea,

carinas þa scipu	4	aduersa wiðerede <sup>231</sup>	687, 2
propensa nþrgmetenan <sup>215</sup>	6	subiaceat undrlīc <sup>232</sup>	4
72r funere hrew	684, 2	72v simulastis lugon,	
inani idlū	2	ġanlicadon	11
passum stæpa	2	uanae ædre <sup>233</sup>	12
pluribus manugū <sup>216</sup>	2	carminibus galdrū <sup>234</sup>	12
exsequis licþeg, licþeg-		memphitis memfītiscn <sup>235</sup>	12
nungū <sup>217</sup>	2	(signa) dabant ġmfap <sup>236</sup>	
urna, mfs <sup>218</sup> deaðe	4		688, 1
remorata latede <sup>219</sup>	5	perspicuo þrhsenre <sup>237</sup>	6
parens hfende <sup>220</sup>	7	gravidam þa ġecnedan	7
comes ġffa <sup>221</sup>	9	turgida þinden	10
reciduo efterrndre <sup>222</sup>		macies hlennes	10
	685, 1	uteri þar wfm <sup>238</sup>	689, 1
quam þa <sup>223</sup>	5	hydrops sio watrsiocns	1
inuaserat geferde <sup>223</sup>	5	morbus ald <sup>239</sup>	7
cuneata þhwedu <sup>224</sup>	6	resident gstitan <sup>240</sup>	8
globo hring	6	pestis cwild <sup>241</sup>	9
neue redundantem oþuhr-		maculosa wom	690, 1
ferne <sup>225</sup>	686, 1	portenta mihtie, seinhiu	2
cumulato gemeni-		quos þa	2
fealdre <sup>226</sup>	1	foedo wletlicū <sup>242</sup>	2
exguis <sup>227</sup> fæm	2	discolor ungebleoh	3
conscia gegite <sup>228</sup>	3	obscenis fulū <sup>243</sup>	3
et scorpion 7 þrowend <sup>229</sup>	8	uacat æmtat <sup>244</sup>	6
inimica unholde <sup>230</sup>	8	uicissim æge <sup>245</sup>	8

but it is doubtful if the gloss means anything more than 'water-folk'. 215. *niper gemetenan*. 216. In ink. 217. The incomplete *licþeg* is in ink. 218. *mors*. The context is *uiduam gemina uiduauerat urna*. 219. In ink. 220. *hyrende*. 221. *gefera*. 222.\* Perhaps for *eftiernendre* or *efterrinnendre* 'returning'; cf. *eftryne: occursus*, Vesp. Psalt., 18, 7; *æferryne: occursus*, Camb. Psalt., 18, 7. 223. In ink. 224. *behewedu*, probably an error for *behewenu*. 225. In ink. Above *o* is a vertical stroke. I would read *ond þurhferne*. 226. In ink. 227. Ed. *exguis*. 228.\* In ink. This adjective suggests an undocumented noun form *gegiet* 'understanding'. Cf. *andgiet* 'understanding', *andgiete* 'manifest'. 229. In ink. 230. In ink. MS *unhode* with a small and somewhat dubious letter above the space between *o* and *d*. 231. In ink. 232. The gloss reaches the edge of the right margin. Read *underlicge*. 233. The glossator mistook the lemma for *uenae*. 234. In ink. 235.\* Cf. 206. 236. *gemærap*. 237. *þurhsenre*. 238. *þare wambe?* 239. Read *adl*. 240. *gesittan*. 241. *cwild*. 242.\* Hall's *Dictionary* cites *wlætlice* = *wlæclīce* 'lukewarm', but the present gloss fits the lemma if it is taken as formed from the stem *wlæt* which appears in *wlætta* 'loathing', *wlætung* 'nausea'. 243. Written twice, once scratched and once in ink. 244. In ink. 245. In ink,

uarium fages	9	74v exciperet utasceade <sup>259</sup>	8
speculantur bescawedan	10	sensu on sefan	707, 2
73r importuna mag <sup>248</sup>	692, 4	foedo fī <sup>260</sup>	4
fides gelæua	4	sanxit gascf <sup>261</sup>	8
contagia cwildu	694, 8	perpete æcū	9
profugus earga <sup>247</sup>	11	liuor æfst	11
ille se <sup>247</sup>	11	consurgere arisan	708, 1
donat fr̥gī <sup>248</sup>	12	quantum swa mī <sup>262</sup>	6
impetus onræs <sup>249</sup>	12	si gif	8
73v means frende <sup>250</sup>	695, 5	caperet he hit aberan	
considerere ġsittan	5	mhte <sup>263</sup>	8
sanguinis cñrs <sup>251</sup>	7	actus ġndd <sup>264</sup>	709, 7
per claustra gidrima <sup>252</sup>		obscurior bisþrra	8
	696, 1	75r minacem ðiwende <sup>265</sup>	710, 3
genarum hæges <sup>253</sup>	1	conueniens ġāf <sup>266</sup>	711, 5
corruptam gewemmed		non . . cuiquam nangū	10
	697, 10	alliger feþrbrenda <sup>267</sup>	712, 1
recreatus eftacwican	699, 7	gallus hana	2
74r faleris bridelgý ī hurst <sup>254</sup>		fauillis yslū	9
	700, 4	deformis wlitelease	713, 4
cui hwam	702, 1	passim wīhw <sup>268</sup>	8
umquam æghw̥r <sup>255</sup>	1	75v non facta unġdon <sup>269</sup>	717, 1
proxima in neaweste	703, 1	76v exubiis reafu, <sup>270</sup>	727, 2
nubila ġnipu	704, 4	78v defectare wegā ī bfn <sup>271</sup>	
ac nec sic 7 āġnswa <sup>256</sup>			741, 11
	705, 1	index bēnd <sup>272</sup>	743, 6
num <sup>257</sup> cwist þu	5	79r toris stl, <sup>273</sup>	749, 1
cenae ġrīde <sup>258</sup>	706, 2		

erased at end; for *ægean* (*ongean*)? 246. *mag* for *mah*, as it is written close to the following gloss, thus, *maggelæua*. In ink. 247. In ink. 248. *forgifþ* or possibly *forgeaf*. 249. In ink. 250. *ferende*. 251. Cf. *sanguinis: cniorisse*, WW., 44, 40. 252. In ink. This is perhaps a scribal error for *gind* (*geond*) *riman*. 253. Incomplete for *hægespind*; cf. *genae: hecgaswind*, WW., 157, 7. 254.\* *bridelgym* 'a bridle-gem', comparable with *bridelshring*. 255. *æghw̥r*. 256. Perhaps for 7 *na ge na swa*. 257. Ed. non. 258. *gereorde*. 259.\* Cf. *excipiat: sy fram asceaden*, WW., 231, 22. 260. *ful*. 261. *gescraf*. 262. Probably for *swa micel*. 263. *mhte*. 264. *geneded*; cf. *actus: geneded*, WW., 354, 20. 265. In ink. 266. *gedefe*. 267.\* Read *feþerberenda*. Hall's *Dictionary* gives only a noun *feþerberend* 'feathered creature', based on the gloss *penniger: feþerberend*, WW., 465, 20. The present gloss is an adjective, the lemma being *alliger* . . . *gallus*, glossed *feþrbrenda hana*. 268. *welhw̥r*. 269.\* *ungedon*. 270. On folio 77v., in the margin opposite the line *fractis abire sepulchris in cineres*, is written in ink in what seems to me a hand earlier than the other glosses, *gewyrtenes geripes*. I find no connection between this and anything in the context. 271. *wegan*, *beran*. 272. Cf. *index: becnend*,

CARMEN DE LAUDE CHRISTI		MIGNE, PATROL. LAT. XIX	
79v pudici clænñ	764, 1	superstes lfgnde <sup>275</sup>	15
enixa cenñnde	5	obstruit frsette <sup>276</sup>	768, 1
80r idriae wtřfta <sup>274</sup>	767, 1	iusus htende <sup>277</sup>	5
EPISTOLA AD MACEDONIUM		MIGNE, PATROL. LAT. XIX	
80v commentario trhttpe <sup>278</sup>		conentur onginen	547, 24
	547, 15		

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WW., 264, 40. 273. setlum. 274. wæterfata. 275. lifgende.  
 276. forsette. 277. hatende. 278. trahttape.

# ON CERTAIN MATHEMATICAL TERMS IN ARISTOTLE'S LOGIC.

## PART II (Cont. from p. 54).

The second type of mathematical terminology in Aristotle is the proportional, and includes the words ὅρος, ἄκρα, μέσον, διάστημα, μείζων and ἐλάττων ὅρος, πρῶτον, μέσον, and ἔσχατον, ἐμπίπτειν, ἐμβάλλειν, καταπυκνοῦν, συνεχής, ἑκθεσις, and ὑπερέχειν. Of these the connection of the first four with the language of proportion has been noted.<sup>1</sup> Although I have not been able to find any explicit references to an analogy between the relation of the terms in a syllogism and the relation of the terms in a proportion among the ancients, it is certain that some, at least, were aware of it, as the diagram with which the first figure of the syllogism is illustrated is the same as that used to illustrate proportions and musical intervals.<sup>2</sup>

There are several analogies between the syllogism and proportion that serve to explain Aristotle's choice of terms. In the first place both an argument and a proportion are spoken of as a movement through several terms. In the *Epinomis* (991a4) διαπορευθεῖσα is used of an ἀναλογία passing from 1 to 8, and Aristotle often speaks of the syllogism as a passing of the argument from one term to another. This notion of "movement" is exemplified in the terms συμπεράσμα and ἀντιστροφή, which are best discussed here.

Συμπέρασμα in the sense of conclusion of a theorem is found in mathematical writings as early as Archimedes,<sup>3</sup> and is used in

<sup>1</sup> Ross, *Aristotle*<sup>2</sup>, p. 33. For ὅρος cf. Paul Cauer, in *Rh. Mus.*, N. F. LXXIII (1920-24), pp. 169-173; Bonitz, *Index*, 530a21 ff.; Burnet on *E. N.* 1131b5.

<sup>2</sup> These diagrams cannot be traced back to Aristotle. For the figure illustrating proportion cf. (for music) Theo Smyrnaeus, ed. Hiller, p. 57, 64; for mathematics the scholia on Euclid, pp. 320 f. (Euclidis, *Opera*, vol. V, Heiberg); and for logic Olympiodorus, in *Platonis Phaed. Comm.* ed. Norvin, p. 111, 27 and 128, 15 etc. and the scholia in Wallies' edition of Ammonius' *Comm. on Anal. Prior.*, pp. viii-xii. The diagrams of the second and third figures do not correspond, so far as I have been able to discover, to any figures used to illustrate the theory of proportion.

<sup>3</sup> *Ad Eratosth. Meth.* 2, vol. II, p. 438, 17 and 19, Heiberg. Proclus, in *Eucl.*, p. 207, 4-13.

the same way in a few passages in Aristotle.<sup>4</sup> The verb occurs in a fragment of Speusippus, where the decad is the "closing" number,<sup>5</sup> and in Nicomachus we have *συνπέρασμα* as the last digit in a number,<sup>6</sup> or the termination of a pyramidal number, whether truncated (*κόλουρος*) or not.<sup>7</sup> The meaning appears, then, to have been that of termination.<sup>8</sup>

In the presence of so little evidence, interpretation must be conjectural. In Plato and Aristotle the process of reasoning or proof is compared to a movement from a beginning to a termination.<sup>9</sup> The beginning is the *ἀρχαί* or premises,<sup>10</sup> and the end would be the conclusion. Further, in Plato, in harmony with the metaphor of the argument being a way (*μέθοδος*, *ὁδός*, with the verb *μετρίναι*), and with Greek usage in general, *περαίνει* is used of bringing an argument to an end, or going on with it,<sup>11</sup> and the word is further extended, no doubt under the influence of the sense "accomplish, bring to pass,"<sup>12</sup> to cover the winning of truth.<sup>13</sup> The Aristotelian use of *περαίνειν* for the bringing

<sup>4</sup> *De An.* 413a16, *Soph. El.* 170a28, *Phys.* 200a21 (opposed to *ἀρχή*).

<sup>5</sup> *Ap.* [Iamblichus], *Theol. Arithm.*, p. 83, 11-14, de Falco: *πρώτον μὲν οὖν ἄρτιον δεῖ εἶναι* (sc. *τὴν δεκάδα*) *ὅπως ἴσοι ἐνώσιν οἱ περισσοὶ τε καὶ ἄρτιοι, καὶ μὴ ἑτερομερῶς· ἐπεὶ γὰρ πρότερος ἀέλ ἐστὶν ὁ περισσὸς τοῦ ἀρτίου, εἰ μὴ ἄρτιος εἴη ὁ συμπεραίνων, πλεονεκτῆσει ὁ ἕτερος.*

<sup>6</sup> Cf. *Introductio Arithmetica*, p. 111, 10, Hoche.

<sup>7</sup> *Int. Arith.*, p. 104, 18, Hoche.

<sup>8</sup> The related meaning "bring to an end," "accomplish," "finish off," "complete" is found in Attic: *Eur., Med.*, 341; *Xen., Cyr.*, VI, 1, 31, *Isocrates, Paneg.*, 171.

<sup>9</sup> Plato, *Rep.*, VI, 510b; Aristotle, *De An.* 407a26-29 and Hicks, ad loc.; *Ar., E. N.* 1095a31-1095b2. Cf. *ἀνακάμπτειν* "to turn around and go back" used of a circular argument where one comes back to the starting point: *An. Post.* 72b36.

<sup>10</sup> For *ἀρχαί* (beginning=premises) opposed to *συνπέρασμα* (end=conclusion) compare *An. Pr.* 43b36 *ὅμοιον γὰρ ἐκάστου τὸ συνπέρασμα ταῖς ἀρχαῖς*, *An. Post.* 77b5 *ἐκ τῶν γεωμετρικῶν ἀρχῶν καὶ συμπερασμάτων.*

<sup>11</sup> Cf. *πολλὴν ὁδὸν περαίνειν* in Aristoph., *Ran.*, 401; *Xen., An.*, III, 2, 32, *Hel.*, VI, 2, 29. For *περαίνειν λόγον* cf. *Isoc., Panath.*, 24 and the new Liddell and Scott s. v. *περαίνω* I, 3. For the Platonic usage cf. *Gorg.* 454c2, 501c7, *Protag.* 360d8, *Laus.*, 672e. Here *λόγος* is more "argument" than "speech." Aristotle uses *συνπεράνασθαι λόγον Top.* 161a1. Cf. *ib.* 162a4, 36, b2.

<sup>12</sup> *Xen., Hiero.*, 9, 7, *Oec.*, 11, 8; *Isoc., Phil.*, 40.

<sup>13</sup> Plato, *Phil.* 11c9 *δεῖ δὴ περὶ αὐτῶν τρόπῳ παντὶ τάληθές πῃ περανθῆναι*; *Polit.* 266d9 *ὅτι τῇ τοιαύτῃ μεθόδῳ τῶν λόγων* (dichotomy) *οὔτε σεμνοτέρου μᾶλλον ἐμέλησεν ἢ μή . . . ἀέλ δὲ καθ' ἑαυτὴν περαίνει τάληθέστατον*; *Gorgias*, 472b.

into being of a syllogism, or the proving of a *πρόβλημα*,<sup>14</sup> could be derived from either of the senses, that of bringing to an end, or compassing the truth. As it can scarcely be shown that Aristotle exercised any influence on Archimedes, it is probable that the word came to the latter by a mathematical tradition, and a common source for both Aristotle and the mathematicians would be the Academy. Whether the word is traceable any further cannot be decided from the data available.

*Ἀντιστροφή* for the converse of a proposition was an established mathematical term, appearing first in Apollonius,<sup>15</sup> but probably older. It would be surprising if the conversion of theorems had not been known<sup>16</sup> in Aristotle's time and, if known, had not received a name. The process of mathematical *ἀνάλυσις*, if nothing else, would infallibly have called attention to it, as here the mathematicians started from the assumption of the truth of the conclusion, to reach the premises, and if the proposition was not convertible the "analysis" would show that the premises or data did not necessarily follow on the truth of the conclusion.

There are two main senses of *ἀντιστρέφω* in Aristotle, the first indicating a change of the quality of predication to its opposite, the quantity either remaining the same, or being likewise

<sup>14</sup> Cf. Bonitz, *Index*, 577b18. *Περίνω* and *συμπερίνομαι* are synonymous in *An. Pr.* 42a8, 20; *περίνεται* and *δείκνυται* 29a32, 35. Cf. 62b39 f. Cf. however 50a32, where there is a distinction, *δείκνυται* indicating actual proof, *περίνεται* the establishment of a conclusion by the "hypothetical" procedure.

<sup>15</sup> *Conica*, I, 284, 19 (Heiberg), Proclus, in *Eucl.*, 247, 3, and especially 252, 5-253, 15.

<sup>16</sup> The remarks of Menaechmus (Proclus, *op. cit.*, 72, 23-73, 5) show that he was aware that certain geometrical premises and conclusions were convertible: *πάλιν δὲ τὸ στοιχείον λέγεται διχῶς, ὡς φησὶν ὁ Μέναιχμος. καὶ γὰρ τὸ κατασκευάζον ἐστὶ τοῦ κατασκευαζομένου στοιχείον . . . οὕτω δὲ καὶ ἀλλήλων εἶναι πολλὰ στοιχεῖα ῥηθήσεται· κατασκευάζεται γὰρ ἐξ ἀλλήλων. δείκνυται γὰρ καὶ ἐκ τοῦ τέτρασιν ὀρθαῖς εἶναι ἴσας τὰς ἔξω τῶν εὐθυγράμμων γωνίας τὸ πλῆθος τῶν ἐντὸς ὀρθαῖς ἴσων καὶ ἀνάπαλιν ἐκ τούτου ἐκείνο.* (Cf. the mathematical example with *An. Post* 86a) Here *κατασκευάζω* is understood by Proclus (cf. 72, 25 f.) as "construct." It is more probable that it means "prove" or "establish," as in the *Topics*. *κατασκευάζω*, being dialectic, would merely establish the *ὅτι*, while the proof from prior and simpler elements would be a true demonstration, and establish the *διότι*. Menaechmus is apparently distinguishing the meanings of *element* with this in mind.

changed to its opposites;<sup>17</sup> the second indicates an interchange of the terms, the subject becoming predicate, and the predicate subject. Related to the former sense is the conversion of dialectical *τόποι* and to the second the conversion of relatives.

The first sense is found chiefly with reference to the conversion of the syllogism (*An. Pr.*, II, § 8, *Top.* 163a29-b16),<sup>18</sup> the conclusion being changed into its *ἀντικείμενον* or *ἀντίφασις*, whether contrary or contradictory.<sup>19</sup> The force of the compounded *ἀντι-* in *ἀντιστρέφω* here is the same as in *ἀντίφασις*, *ἀντίθεσις*, and *ἀντικείμενα*. A similar force of the preposition is seen in the use for conversion of a *τόπος*,<sup>20</sup> the *τόπος* being said to "convert" either for proof or disproof.<sup>21</sup> Here the proof and disproof are opposites, and the *τόπος* turns from the establishment of a conclusion to the opposite, the disestablishment of the conclusion or establishment of the contrary or contradictory.<sup>22</sup>

The other sense of *ἀντιστρέφω* is found in two main usages, for the conversion of a syllogistic premise, and for that of relatives. It has been suggested that the word is derived from the antistrophe of the choral dances (Trendelenburg, *De Anima*<sup>2</sup>, p. 332); but while this is no doubt true for the adjective *ἀντίστροφος*, which probably designated originally the correspondence between the position in the one group and the analogous position in the other,<sup>23</sup> it is probably not true for the

<sup>17</sup> Cf. *An. Pr.* 59b4, 6, 45b6 (contradictory).

<sup>18</sup> It is used with regard to contingent premises (*An. Pr.* 32a30, 36b35, 38 etc.), but not exactly in the same sense, as here there is an implication that if the proposition is true, its *ἀντιστροφή* is also true, else it is not said to be convertible.

<sup>19</sup> For *ἀντίφασις* covering both contrary and contradictory cf. *Soph. El.* 180a23-31.

<sup>20</sup> Cf. Bonitz, *Index*, 66b35-41.

<sup>21</sup> Cf. *Top.* B 109b25 f. οὗτος δ' ὁ τόπος ἀντιστρέφει πρὸς τὸ ἀνασκευάζειν καὶ κατασκευάζειν and the passages in Bonitz, *Index*, 66b37.—*στρέφω* here is intransitive.

<sup>22</sup> Cf. *Top.* B 115a33 f. οὗτος δ' ὁ τόπος οὐκ ἀντιστρέφει πρὸς τὸ κατασκευάζειν, and the passages in Bonitz, *Index*, 66b39-41. With this usage may be compared certain uses of *στρέφω* in Plato (where the word however is transitive): *Soph.* 239d7 *ἐς τοῦναντίον ἀποστρέψει τοὺς λόγους*, *Gorgias*, 511a . . . *στρέφεις τοὺς λόγους ἄνω καὶ κάτω*.

<sup>23</sup> Cf., e. g., Plato, *Gorg.* 464b, *Theaet.* 158c3 where the meaning of correspondence is very clear.

changed to its opposite;<sup>24</sup> the second indicates an interchange from the adjective. The word as used of the conversion of premises is probably derived from the conversion of mathematical theorems, as the "converse" of a theorem could be stated in a sentence where the subject and predicate have been converted;<sup>25</sup> while the geometrical term itself probably goes back to the literal meaning of ἀντιστρέφειν, to "turn (transitive or intransitive) in the 'opposite direction,'" <sup>26</sup> from συμπέρασμα to ἀρχαί. It is perhaps from such a geometrical connection that "conversion" has the connotation of being valid: supposing an origin in the mere idea of "reversal," we should not so readily obtain this connotation as if we started from the movement of geometrical proof in the direction from conclusion to data. With the conversion of premises the "conversion" of relatives <sup>26</sup> is connected, for the relation can be expressed as a kind of predication: the father *is* of the son, the son *is* of the father.

There is a combination of the two meanings in the "conversion" of a syllogism (*An. Pr.*, II, 8; *Top.* Θ, 14 *init.*). The reversal of direction from the conclusion to the premises exemplifies the second meaning, while the conversion of the conclusion to its opposite exemplifies the first.

It will be noticed that all these meanings accord with the comparison of an argument to the traversing of a road adverted to above in the discussion of συμπέρασμα. Not only are both the syllogism and proportion thought of as "movements" or "progressions": there is further a definite superficial resemblance between Aristotle's way of stating a syllogism and the language in which certain ratios were expressed, as, for example, in the *Sectio Canonis*, a work of the fourth century B. C.<sup>27</sup> attributed

<sup>24</sup> Aristotle in fact goes so far in the direction of stating a theorem in the form of a categorical sentence as to say that the triangle *is* two right angles (*Met.* Θ 1051a24). The standard way of stating a theorem in mathematics is to use a condition, and certain passages can be quoted for a "statement of convertibility" approaching closer to mathematical language: *Cat.* (Postpred.) 14b17 (cf. *Gen. et Corr.* 337b23.)

<sup>25</sup> Cf. for the literal meaning Xen., *Agesilaus*, 1, 16.

<sup>26</sup> *Cat.* 6b28, *Top.* 125a6.

<sup>27</sup> Cf. Heiberg, *Gesch. d. Math. u. Naturwissenschaften im Alt.*, 1925, p. 81, n. 6; P. Tannery, (*Mém. Scientif.*, III, pp. 213 ff.). Tannery (*ib.*,

to Euclid. Aristotle's method of expressing a syllogism in the first figure is as follows: A is predicated of B, and B of C; therefore A is predicated of C (cf. *An. Pr.* 25b37 and *passim*).<sup>28</sup> The first proposition in the *Sectio Canonis* runs as follows: Ἐὰν διάστημα πολλαπλάσιον δις συντεθὲν ποιῇ τι διάστημα, καὶ αὐτὸ πολλαπλάσιον ἔσται. ἔστω διάστημα τὸ ΒΓ, καὶ ἔστω πολλαπλάσιος ὁ Β τοῦ Γ, καὶ γεγενῆσθω, ὡς ὁ Γ πρὸς τὸν Β, ὁ Β πρὸς τὸν Δ· φημὶ δὴ τὸν Δ τοῦ Γ πολλαπλάσιον εἶναι. ἐπεὶ γὰρ ὁ Β τοῦ Γ πολλαπλάσιός ἐστι, μετρεῖ ἄρα ὁ Γ τὸν Β. ἦν δὲ καὶ ὡς ὁ Γ πρὸς τὸν Β, ὁ Β πρὸς τὸν Δ, ὥστε μετρεῖ ὁ Γ καὶ τὸν Δ. πολλαπλάσιος ἄρα ἐστὶν ὁ Δ τοῦ Γ.<sup>29</sup> We find here the same kind of language: if C measures B, and B measures D, then C must measure D. It is further worth noting that the mathematical analogy here suits especially the first mood of the first figure, which is precisely the figure Aristotle calls perfect, and to which he reduces the others in order to show their validity; and that of the first figure the first is the most important mood.

The word *ὅρος* was in use before Aristotle's time as a term in an *ἀναλογία*, that is, an arithmetical, geometric, or harmonic progression.<sup>30</sup> The connection between this use of the word and Aristotle's use of it as a term in the syllogism has been noted.<sup>31</sup>

pp. 216 ff.) shows the close affinity of the treatise with Archytas, and conjectures (p. 218) that the author belonged to the Academy.

<sup>28</sup> The analogy holds equally well if we consider the statement with *ὑπάρχειν*, or even that used in *An. Pr.* 23b32, where the last term is said to be in the middle term as whole, and the middle term in the first as whole. Here the proportional analogy is with the "C measures B" of the *Sectio Canonis*. As the "whole" implies *μέρος* (cf. *An. Pr.* 49b38) there may be some reference here to the mathematical *μέρος* which measures a number (Eucl., *Elem.*, V, def. 1).

<sup>29</sup> "If a multiple interval when twice compounded makes an interval, that interval will also be a multiple. Let BC be an interval, and let B be a multiple of C, and let it be that, as C is to B, B is to D: I say then that D is a multiple of C. For, since B is a multiple of C, C is a measure of B. But as C was to B, so B is to D, so that C measures D as well. Therefore D is a multiple of C."

<sup>30</sup> Cf. n. 10, p. 34; Archytas, *fr.* 2, Diels' *Vorsokratiker*, I<sup>4</sup>, p. 335; Plato, *Phileb.* 17d1 (musical); Ar., *E. N.* 1131b5 ff.; and Hultsch in the article *Arithmetica*, Pauly-Wissowa, *R. E.*, II, 1095, 33 ff. For the early connection between the theory of proportion and harmonics cf. Robbins, *Nicomachus of Gerasa*, Univ. of Mich. Studies, Humanistic Series, vol. XVI, 1926, pp. 20 f.

<sup>31</sup> Cf. n. 1, *supra*.

That Aristotle was quite conscious of the mathematical associations of the word appears from the fact that he uses *ὁρος* of the three terms of the syllogism—and three terms are the minimum in a proportion or progression<sup>32</sup>—while in discussing the proposition independently of its use in the syllogism he avoids the word, using instead his expressions for subject and predicate.<sup>33</sup> The difference between the terminology of the independent proposition and the premise is otherwise noticeable.<sup>34</sup> The natural explanation of this avoidance of *ὁρος* is that its mathematical associations made it suitable for the one context, but not the other: we can have a proportion in three terms, but not in two. The same associations of *διάστημα* account for its use for a premise, and not for an independent proposition.<sup>35</sup>

In using *ὁρος* Aristotle presumably did not wish to imply a true inner connection between a proportion and a syllogism; he merely seized on a very convenient expression for “x,” an expression which could cover the ten categories and the five predicables. For designating the disparate kinds of things that are used as subject and predicate he could not, according to his custom, use a neuter pronoun, such as *τόδε*.<sup>36</sup> Besides involving him in grammatical difficulties, this would only designate certain particular terms, when a general word was required. In *ὁρος*

<sup>32</sup> Cf. Euclid, *Elem.*, V, def. 8: ἀναλογία δὲ ἐν τρισὶν ὁροῖς ἐλαχίστη ἐστίν. with *An. Pr.* 41b36 πᾶσα ἀπόδειξις δὲ τριῶν ὄρων, 53b19 f. and *An. Post.* 81b10. In *E.N.* 1131a31 Aristotle tries to show for his immediate purpose that ἀναλογία is ἐν τέτταρσιν ἐλαχίστοις. But he is enabled to do so only because he chooses to view b in the proportion  $a:b::b:c$  as a sort of duplicate mean.

<sup>33</sup> The use in *De Caelo* 282a1, though not strictly syllogistic, belongs to the theory of proof. The same is true of *ὁρος* in *An. Pr.* 51b14, 53b16. Cf. 68b8.

<sup>34</sup> The independent sentence is called λόγος, the premise διάστημα, (although sometimes πρότασις is used for both); in the independent sentence, predication is usually expressed by ἐστὶ (*De Int.*, *passim*, *An. Pr.* 43a28 f.) in the syllogism usually by various other means, such as κατηγορεῖσθαι τινος, ὑπάρχειν τινὶ and ἐν ὅλῳ εἶναι τινι.

<sup>35</sup> Cf. Nicomachus, *Arith.*, II, 6, 3 (p. 85, 2 Hoche) διάστημα γάρ ἐστι δυνεῖν ὄρων τὸ μεταξὺ θεωρούμενον. For further uses of διάστημα in proportion cf. Archytas, *fr.* 2, Diels' *Vorsokratiker*, I<sup>4</sup>, p. 335; and (in music) Plato, *Phileb.* 17d1.

<sup>36</sup> As in *An. Pr.* 48b30, 49ab.

he found a word used as the general designation for the elements of any progression, whether ἀριθμοί, ὄγκοι, or δυνάμεις.<sup>37</sup>

In *An. Post.* 84b12<sup>38</sup> Aristotle uses ἐμπίπτειν of the insertion of a middle term between the two terms of a premise. Elsewhere (*An. Pr.* 42b8, 23, *An. Post.* 95b23) he uses παρεμπίπτειν in the same way. In the *Sectio Canonis* ἐμπίπτειν is used of the insertion of a proportional mean in an interval (IV, p. 164, 12; III, p. 162, 8), and we find it in Euclid of the interpolation of a proportional between two numbers.<sup>39</sup> The inference is natural that this is another term borrowed from the mathematics of ἀναλογία.

There is an isolated use of καταπυκνοῦσθαι<sup>40</sup> to indicate the insertion of an increasing number of middle terms between the subject and predicate of a premise, until the ἄμεσα are reached, and no more terms can be inserted. The word not improbably was taken from musical theory, where it indicated the filling up of the intervals with new notes, especially notes of less than a full tone, such as semitones and quarter tones.<sup>41</sup> The expression is then particularly apt, denoting in both logic and music the filling up of the smallest possible intervals. That the word was probably older than Aristoxenus can be gathered from the technical term πύκνωμα used by Plato in a related sense (*Rep.* 531a).

Aristotle's use of the letters such as A, B, and Γ for the terms<sup>42</sup>

<sup>37</sup> Plato, *Tim.* 31c; Ar., *An. Post.* 74a17 ff.; cf. 85a38.

<sup>38</sup> In *An. Post.* 84a36 ἐμβάλλεσθαι is used in the same sense as ἐμπίπτειν (cf. also *ib.*, 88b5). As the word here is contrasted with προσλαμβάνεσθαι, a passive form was required for symmetry, and because of the use of πίπτω as passive of βάλλω, ἐμβάλλεσθαι was chosen. Further a causative word was needed, and thus we have ἐμβλητέον (*An. Post.* 86b18). In Nicomachus (*Introd. Arithm.*, p. 138, 6 [Hoche]) the following phrase occurs: ἐὰν δὲ τὴν κ' μεσότητα ἐμβάλλω εἰς τοὺς . . . ὄρους. The word may well, therefore, have been in mathematical usage in this sense in Aristotle's time, and in that case there would be no need to assign to him its derivation from ἐμπίπτω.

<sup>39</sup> *Elem.*, VIII, 8, 9, 10, and especially 21.

<sup>40</sup> *An. Post.* 78a30.

<sup>41</sup> Cf. s. v. in the index of Marquardt's *Aristoxenus* and Theo of Smyrna, p. 91, 8, Hiller.

<sup>42</sup> Aristotle's phrasing varies, and sometimes he writes (τὸ) A, sometimes ἐφ' ᾧ A or ἐφ' οὗ A. In the earliest fragment of Greek geometry that has been preserved, Hippocrates' quadrature of lunes, the same

and AB, BΓ for the premises, corresponds very closely to the use of the letters found in the *Sectio Canonis*, where in the theorem just quoted BΓ is a διάστημα, and B, Γ, Δ, though thought of as ἀριθμοί, could well have been termed ὄροι.<sup>43</sup>

The designations μείζων and ἐλάττων ὄρος for the major and minor terms were doubtless also taken from the language of proportion. In a fragment of Archytas (*fr.* 2, Diels) the expressions μείζονες and μείους ὄροι are applied to terms in all three progressions. Many passages in later authors can be adduced to show that the use of μείζων and ἐλάττων to distinguish the terms of a progression was technical,<sup>44</sup> and Aristotle's own language in one passage might possibly be taken to corroborate this.<sup>45</sup>

Aristotle appears to have avoided, at least in the two *Analytics*, expressing predication in the syllogism by the copula,<sup>46</sup> or even

variety is seen: For ἐπὶ with the genitive cf. Hipp. *ap. Simpl.*, in *Phys.* (Diels) p. 67, lines 15, 21, 23, 27; for ἐπὶ with the dative p. 67, lines 30, 31, 37; for the article without the pronoun or ἐπὶ p. 67, lines 28, 36 etc. Cf. on this point Heiberg, *op. cit.*, pp. 17 f., 32, 34, Heath, *Apollonius of Perga*, p. clvii n., and *id.*, *The Works of Archimedes*, p. clvi.

<sup>43</sup> For ὄροι so used cf. Plato, *Phileb.* 17d. That the use of the letters was borrowed from the mathematicians was noticed by Barthélemy-Saint-Hilaire, *Logique d'Aristote*, II, p. 7, n. 6.

<sup>44</sup> [Aristotle] *Problem.*, xix, 35; Schol. in Eucl. *Elem.*, V, def. 11, vol. V, 294, 19 (Heiberg); Nicomachus, *Int. Ar.*, I, 23, 14 (p. 68, 11 ff., Hoche), II, 26, 2 (p. 135, 20 ff., Hoche), *id.*, *Ench. Harmon. ap. Jan., Mus. Script.*, p. 250, 20; Theo Smyrn., p. 110, 2, 6, 8, 13 (p. 113, 14 f., Hiller); *Epinomis* 991a.

<sup>45</sup> *E. N.* 1132a29. The use of πλέον and ἐλάττων in *E. N.*, V, 3 and 4 instead of μείζων and ἐλάττων, which would be the mathematical terms, is accounted for by Aristotle's evident wish to bring out the parallelism of his theory with the popular expressions πλέον ἔχειν, ἐλάττων ἔχειν, connected with πλεονέκτης, a common description of the ἄδικος. The term πλεονέκτης was in turn used because it brought out more vividly the relation of justice—τὸ ἴσον ἔχειν—with the geometric proportion (ἡ ἰσότης ἡ γεωμετρική) cf. Plato, *Gorgias* 508a.

<sup>46</sup> Aristotle uses instead of the copula such phrases as κατηγορεῖσθαι with the genitive and especially ὑπάρχειν with the dative, or such expressions as τὸ B ἐστὶν ὑπὸ τὸ A (*An. Pr.* 30a40, b13 31a30) or τὸ B ἐστὶν ἐν ὅλῳ τῷ A (*An. Pr.* 25b33, cf. Bonitz, *Index*, 505b13-16) or ἔπεται or ἀκολουθεῖ with the dative (Bonitz, *ib.* 267a61 ff.) This avoidance can be explained in the light of a passage of the *Topics* (109a11). Aristotle here says that when the predicate is an *accidens*, we cannot infer from the fact that predication is expressed by ὑπάρχειν with the dative, that

with *κατηγορῶ* (Cf. *An. Pr.*, I, 36). It was natural then that in his descriptions the predicate should be mentioned first, as it is much easier to say "animal" belongs to, or is predicated of "man" than to say "man" is that whereof "animal" is predicated, or "man" is that whereto "animal" belongs.<sup>47</sup> The natural way, then, of expressing a syllogism in the first figure for example, would be to say: A belongs to B, B to Γ; therefore A belongs to Γ. In other words, the use of the verb "belong" and its equivalents almost compels mention of the terms in the order of decreasing extension. Modern logicians, on the other hand, using the copula, do not use the terms in barbara in any order depending on extension. If they should put the minor premise first, however, they would have an order of increasing extension. As it is, the retention of Aristotle's order of the premises, with the use of the copula, has the result that the modern statement of the syllogism is much less symmetrical, and its truth not so immediately evident, as in the statement used by Aristotle.

Aristotle's starting-point then was the term of greatest extension, and beginning with this, he called the terms in order *πρῶτον*, *μέσον*, and *ἔσχατον*, very probably borrowing the language of the mathematicians of his day, if we may judge from a passage of Plato where the three names indicate the terms of a proportion.<sup>48</sup> The use of these terms in the syllogism agrees with

it can be expressed with the copula, although the opposite inference of predication with *ὑπάρχειν* from predication with *ἐστὶ* is valid. In the case of other predicables, definition, proprium, and genus (differentia, being assimilated to genus, is not mentioned) predication with *ἐστὶ* and *ὑπάρχει* is everywhere interchangeable. As it was Aristotle's aim to be as general as possible, it was only natural that in the *Prior Analytics*, where he did not, as in the practical dialectics of the *Topics*, need to take account of normal usage, he adopted the wider method of predication. Cf. also *An. Pr.* 48b28-30: οὐ γὰρ δεῖ σημαίνει τὸ μὴ ὑπάρχειν τόδε τῷδε μὴ εἶναι τόδε τόδε, ἀλλ' ἐνλοτε τὸ μὴ εἶναι τόδε τοῦδε ἢ τόδε τῷδε. . . . Cf. Maier, *Syllogistik*, II, 2, p. 343, n. 2.

<sup>47</sup> Aristotle did, however, manage to express the relation in a less clumsy way and still avoid the straightforward use of the copula. Starting with the subject, he used the phrase τὸ B ἐν ὅλῳ τῷ A ἐστὶ. Cf. Philop., in *An. Pr.* 24b26 (p. 39, 3, Wallies).

<sup>48</sup> Plato, *Tim.* 32a1. That the use here is technical may be gathered from the use of *πρῶτον* and *ἔσχατον* in the *Sec. Can.*, p. 162, 3 and in Euclid's *Elements*, VIII, 7. Although the first term of a proportion in

their use elsewhere (cf. Waitz on *An. Pr.* 25b33), and it was partly perhaps to preserve this agreement that Aristotle prefers the statement with *ὑπάρχειν* and its equivalents to that with *ἐν ὅλῳ εἶναι*.

Aristotle uses *ἐκθεσις τῶν ὄρων* in two main senses. In the first, the procedure indicated is that of taking an argument and putting it into syllogistic form by selecting what words or phrases, in what formulation, are to be terms of the syllogism; in the second, a word, or expression covering part of the extension of a term of a syllogism is substituted for that term.<sup>49</sup> The second of these procedures is, as Ross implies (*Aristotle*, p. 36, n. 2) similar to the *ἐκθεσις* of geometry,<sup>50</sup> where the elements in the enunciation are represented by actual points, lines, and other corresponding elements in a figure. The original meaning of *ἐκκεῖμαι* in geometry was perhaps "to be set out in a figure" and thus separated from the other elements of the enunciation.<sup>51</sup>

Thus the actual singling out of part of the extent of a term and the designation of it by a letter is quite parallel to the mathematical procedure.

In Theo of Smyrna is found the identical phrase *ἐκθεσις τῶν ὄρων*, and in Nicomachus *ἐκθεσις* and the related words are used in connection with *ὄροι*, or terms of an *ἀναλογία* or progression,<sup>52</sup>

Euclid is often the smallest (cf. *Elem.*, VIII, 7 and IX, 8-13), there are indications that the older custom was to start with the largest term as *πρῶτον*, and end up at the smallest term as *ἔσχατον*. In definitions 15 and 16 of book V, for instance, the antecedent is supposed greater than the consequent (Cf. Sir. T. L. Heath, *op. cit.*, II<sup>2</sup>, p. 135). Compare also the substitution of *ἡγούμενος* and *ἐπόμενος* for *μείζων* and *ἐλάττω* respectively, discussed in Part I, p. 34, n. 12 *supra*.

<sup>49</sup> Cf. H. Maier, *Syll. d. Ar.*, II, 1, pp. 310-320, II, 2, pp. 141-149, and Ross on *Met.*, A 992b10.

<sup>50</sup> Cf. Proclus, in *Eucl.*, 203, 7-9 and 206, 16 f., and Sir T. L. Heath, *op. cit.*, I<sup>2</sup>, pp. 129 f. Cf. also Euclid, *Elem.*, I, pp. 294, 17; 298, 18; II, pp. 108, 20; 294, 18 (Heiberg). We may suppose that *ἐκθεσις* and *ἐκκεῖται* took the place of an earlier *κεῖται*. As used in mathematical theorems *κεῖται* is ambiguous, referring either to situation in space, or to assumption as a hypothesis; *ἐκκεῖται* clarifies the situation, and specifies that when we say *ἐκκείσθω γραμμή* we do not mean "let a line be supposed to exist" or "let a line be placed" but rather "let a line be set out in a diagram before us." Cf. p. 167, n. 72, *infra*.

<sup>51</sup> Cf. Maier, *Syllogistik*, II, 2, p. 141 and n. 1.

<sup>52</sup> Theo Smyrn., p. 20, 5-9 (Hiller): ἀπλῶς δὲ ἀρχὰς ἀριθμῶν οἱ μὲν

the most common meaning of the group of words *ἐκθέσεις*, *ἐκτίθεσθαι*, and *ἐκκεῖσθαι* being that of taking numbers out of their context in the number scale and setting them out as terms in a progression or *ἀναλογία*. In Aristotle the procedure to which this is analogous is the choosing of what expressions or words are to be set out as terms in a syllogism, and it may be suggested that he took the name of this procedure, *ἐκθέσεις τῶν ὄρων*, from the mathematical process.

In one passage only (*An. Post.* 99a24) does Aristotle use *ὑπερέχειν*, the common mathematical designation for one term's being greater than another in an *ἀναλογία* (cf. Archytas, *fr.* 2, Diels; *Ar. E. N.* 1106a34, 1132b4, *Top.* 124b30), to indicate greater extension. His usual word is *ὑπερτείνει*, which, it appears, does not occur in the literature in a mathematical sense. Other synonyms, used each only on one occasion, are *ἐπεκτείνειν* (*An. Post.* 96a24-27) and *παρεκτείνειν* (*ib.* 99a35f.) It is tempting to think of them as referring to the equality or inequality of the lines with which the doctrine of proportion was illustrated in Aristotle's time.<sup>53</sup>

The analogy of the syllogism and proportion is not confined to the equality of the number of terms in the syllogism and the minimum proportion nor to the resemblance of "A belongs to B, B to C, and therefore A to C" and "A is a multiple of B, B of C, and therefore A of C" but, as the use of the word *ἐμπίπτειν* shows, goes further. Aristotle believed that between the subject and predicate of a proposition there might be a number of middle terms varying from none at all to a very great, though not infinite, number. Thus to prove that A is predicated of C (in

ὑστερόν φασι τήν τε μονάδα καὶ τὴν δυάδα, οἱ δὲ ἀπὸ Πυθαγόρου πάσας κατὰ τὸ ἐξῆς τὰς τῶν ὄρων ἐκθέσεις, δι' ὧν ἄρτιοι τε καὶ περιττοὶ νοοῦνται. . . . Cf. Moderatus *ap.* Stob., vol. I, p. 21, 25 (Wachsmuth). Here the *ἐκθέσεις* are the progressions containing the even and odd numbers respectively as their terms. Sometimes it is the progression which is "set out" (Theo Smyrn., p. 108, 8 [Hiller]), sometimes the numbers are set out in a progression (Theo Smyrn., p. 110, 4; Nicom., *Int. Arith.*, pp. 33, 12; 53, 7; 61, 11; 66, 1; 92, 9; 97, 18; 100, 2; 115, 9 [Hoche]; Euclid, *Elem.*, IX, 36), and sometimes the terms of the progression itself are called *ἐκθέσεις* (Nicom., *Int. Ar.*, p. 16, 19). Where the terms are said to be set out (Nicom., *Int. Ar.*, pp. 67, 1; 128, 8; Theon, p. 22, 16) we should no doubt think of numbers set out as terms.

<sup>53</sup> *E. N.* 1131b1 ff. Plato's divided line was no doubt suggested by proportion.

case the proposition is provable, and not an *ἀμεσον*) it is necessary to find a "middle term," such as B, with which we may construct a syllogism in the first figure. Such is the procedure described in the *Posterior Analytics*. It is obviously suited to the first figure only, and there especially to *barbara*. The terminology of proportion, found in both *Prior* and *Posterior Analytics*, and especially appropriate to the mood *barbara*, suggests that Aristotle hit upon this mood—the one most prominent in scientific demonstration—first and, after having developed a terminology suitable to that mood, applied it to the other figures and moods when they were discovered. It may be noted here that the proportional analogy cannot be made to correspond to negative and particular premises and conclusions,<sup>54</sup> and that it must, therefore, have been with the mood *barbara* in mind that Aristotle developed it.

From its analogy with the middle in proportion and position between the two extremes, subject and predicate, the "middle" got its name; when the other figures were discovered, it was natural to retain the terms *μείζων* and *ἐλάττων ὅρος*, since the conclusion or starting-point of the "analysis" retained the same terms, in whatever figure it was reached, and to assign the name "middle" to the third term, which linked the other two, this linking<sup>55</sup> being perhaps felt by Aristotle as a further justification for the name "middle," since a continuous proportion, where the middle is the same, is called *συνημμένη ἀναλογία*.<sup>56</sup>

<sup>54</sup> If we take "measurement," as found in Euclid and the *Sectio Canonis* (*Elem.*, VII, def. 3-14), and its absence as the analogues of the universal affirmative and the universal negative, the analogy with proportion is imperfect. The proportion corresponding to *celarent* would be: a is not measured by b, b is measured by c, therefore a is not measured by c. But this is false, as the examples 8, 6, 2 show. If we take incommensurability as the analogue of the universal negative, a similar difficulty occurs, as here the invalid mood *AAA* of the first figure has a valid analogue.

<sup>55</sup> *συνάπτειν*, *An. Pr.* 41a1, 12, 19.

<sup>56</sup> Nicomachus, *Int. Arith.*, II, pp. 21, 5; 23, 2 and 3. Aristotle however has *συνεχῆς ἀναλογία* (cf. Sir T. L. Heath, *op. cit.*, II<sup>3</sup>, p. 131. *Συνεχές* is however connected with *συνάπτειν* by Aristotle: cf. *An. Pr.* 65b14 (*δύναπτος*), 20, 21, 24, 29, 34 (*συνεχές*), 33, 41a11 f. (*συνάπτειν*). Cf. Aristotle's definition of *συνεχές*, which is certainly applicable to the continuous proportion, which he may well have had in mind in formulating it: *Phys.* V, 227a10. Cf. also *σύναψιν* *ib.*, 16, and the interesting

The *ἀνάλυσις* of the conclusion, then, could be said to rest on the discovery of a "middle" to connect the two extremes found in the conclusion, and it is clear that, given the conclusion or "problem," there were only three places where the middle term could be found: between the major and minor in essential predication (*καθ' αὐτό*, excluding the accidents), above both, or below both. Thus the three figures were differentiated (cf. *An. Pr.*, I, 23).<sup>57</sup>

With the departure from the scale of predication *καθ' αὐτό*, and the admission of negative and particular propositions, the conceptions that are here supposed to have been operative in the syllogism as first discovered, and in the formulating of the terminology, underwent a considerable modification, the effects of which are especially evident in the inadequacies of the latter.

Perhaps the analogy of the syllogism with proportion can throw light on the vexed question of Aristotle's failure to recognize the fourth figure, for in *An. Pr.*, I, 23, as has been seen, the *fundamentum divisionis* of the three figures is stated.<sup>58</sup> Again, there are many indications that Aristotle thought of the order of the terms as determining the figure; in the first figure the order is presumably major, middle, minor, and the reading: major belongs to middle, middle to minor, therefore major to minor;<sup>59</sup> in the second the order is middle, major, and minor, and the reading: middle belongs to major, middle belongs to minor, therefore major belongs to minor;<sup>60</sup> in the third, the

passage *An. Pr.* 42b1-26, which appears to have been inspired by Plato's discussion of *ἄψις* in *Parmenides* 149a.

<sup>57</sup> Cf. Maier, *Syllogistik*, II, 2, p. 86; II, 1, Chap. I, iii. This *fundamentum divisionis* does not however exclude the fourth figure, where as in the first the middle is between the extremes. To explain the absence of this figure in Aristotle recourse must be had to the proportional analogy. Cf. pp. 165-169, *infra*.

<sup>58</sup> The fourth figure would therefore be classed with the first as one in which the middle term came between the major and minor in predication.

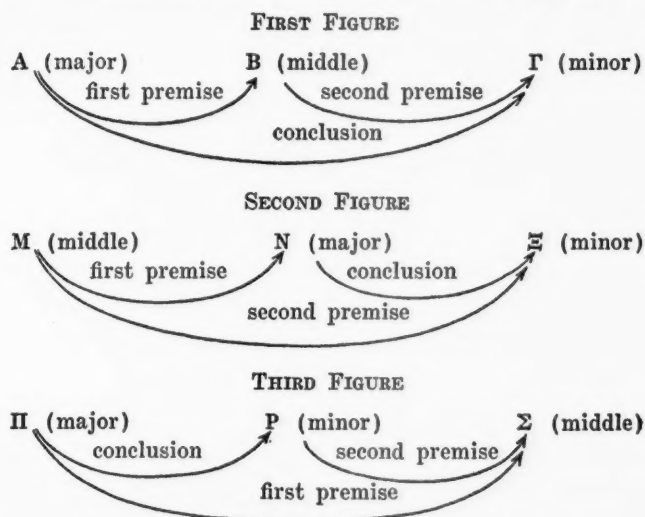
<sup>59</sup> *An. Pr.* 25b32-37. The only indication of order is that the middle comes between the extremes, but the following discussion and the analogy of the order in the other figures make it certain that the order is as stated. No doubt his use of the phrase *ἐν ὅλῳ* prevented him from referring to the major term as first, the minor as last, for the statement with *ἐν ὅλῳ* mentions the minor first and the major last.

<sup>60</sup> *An. Pr.* 26b34-39.

order is major, minor, middle, and the reading: major belongs to middle, minor to middle, and therefore major to minor.<sup>61</sup> It will be noticed that if all three figures are illustrated with the diagram for proportion, whether in mathematics or music, found in late authors, the direction of the arrows is always the same,<sup>62</sup> and to this extent, at least, the resemblance to the first figure and analogy with proportion is preserved. Further, it is to be noticed that the major always precedes the minor. In the fourth figure the middle is predicated of the major, and minor of the middle, therefore the major is predicated of the minor. In a scheme, the minor would precede the major, and the movement in the premises would be from minor through middle to major, while the conclusion would have the opposite direction. It is evident that the analogy with proportion disappears entirely,<sup>63</sup> while in the three figures recognized the analogy is preserved to a degree, the major term always preceding the minor and the movement being always in the same direction.

<sup>61</sup> *An. Pr.* 28a13-15.

<sup>62</sup> Cf. Ross' discussion of "movement": *Aristotle*<sup>2</sup>, pp. 34 f.



<sup>63</sup> A corroboration of this notion of passing in one direction without turning back in reasoning is to be found in *De Anima* (with reference to the first figure) 407a25-29: αἱ μὲν οὖν ἀποδείξεις καὶ ἀπ' ἀρχῆς, καὶ ἔχουσι πῶς τέλος τὸν συλλογισμὸν ἢ τὸ συμπέρασμα. εἰ δὲ μὴ περατοῦνται, ἀλλ' οὐκ ἀνακάμπτουσι γε πάλιν ἐπ' ἀρχήν, προσλαμβάνουσαι δ' αἰ μέσον καὶ ἄκρον εὐθυποροῦσιν. . . .

The connection that has been shown to have existed in Aristotle's mind between the syllogism and proportion can be made to throw some light on the diagrams used in illustration of the syllogism.<sup>64</sup> The contemporary diagrams with which the doctrine of harmonics and proportion was illustrated were probably horizontal lines, of equal, or what is more likely, varying length, lying directly above or below each other, representing the ὄροι,<sup>65</sup> while the distances between them may originally have been thought of as representing the διαστήματα. In the *Sectio Canonis*, however, there are traces of an arrangement of horizontal lines placed side by side with their extremities touching.<sup>66</sup> The other arrangement found in this work, where the lines are parallel and vertical, is no doubt a variation of the diagram with the lines parallel and horizontal, for the convenience of the scribe, both arrangements being found in Heiberg's text of Euclid's *Elements*.<sup>67</sup> In book V, which deals expressly with proportion, however, the lines are always given in Heiberg's text as horizontal, and it may be presumed that this is the earlier arrangement, especially as a horizontal line of any length is more easily drawn on sand or paper than a vertical line,<sup>68</sup> and that

<sup>64</sup> That the diagrams were used is probable from the use of the letters of the alphabet for the terms, a usage taken from the doctrine of proportion, which was illustrated by lines. In the *De Interpretatione* the relations of propositions are presented schematically (cf. 19b26-20a15, especially ἐκ τῶν υπογεγραμμένων 19b26, κατὰ διάμετρον 19b35 f., and the ὑπογραφή in 22a22-31.).

<sup>65</sup> Cf. Ptolemy, *Harmonica*, I, 5 (ed. I. Düring, p. 12); Euclid, *Elem.*, V and VII-IX, *passim*.

<sup>66</sup> Euclid, *Opp.* (Heiberg-Menge), vol. VIII, p. 160 and 161 n. The continuous line thus formed may represent the monochord (κανών).

<sup>67</sup> For book VII cf. for vertical lines vol. II, pp. 189, 201, 205 (Heiberg); for horizontal vol. II, pp. 207, 209, 219 (Heiberg).

<sup>68</sup> A line is usually designated by the letters at its extremities, as AB, but in the *Sectio Canonis* and the books of Euclid dealing with proportion in general and arithmetic (V and VII-X) the lines are designated by single letters. Where the line is divided, however, the former method is for obvious reasons used by Euclid.

A line (γραμμή) takes the feminine article, and such expressions as ἡ AB are universal. It may be asked, then, why it is that Aristotle always uses the neuter of his letters. There was no doubt some variation of practice here. The lines of the *Sectio Canonis*, representing as they do numbers, ἀριθμοί (cf. p. 160, 2-4 [Menge]), are designated by letters preceded by the masculine article, as ὁ B, ὁ Γ, and the same usage is

the lines drawn in the teaching of geometry were of considerable length may be gathered from the use of ἡ ποδιαία for the unit.<sup>69</sup>

The arrangement in a continuous line is probably very old, as it agrees with Plato's use of the divided line<sup>70</sup> in illustration of a proportion, and is no doubt the source of the later diagrams of proportion and of the first syllogistic figure (cf. n. 2, and p. 165 *supra*) where the horizontal lines have degenerated into points.

In the passage of the *Nicomachean Ethics* which deals with the proportion of desert and reward the terms were represented as lines, as the feminine article shows;<sup>71</sup> and these lines would best have illustrated the proportion in hand if separate from each other, and not segments of a continuous line, as the supposition of the "placing<sup>72</sup> of the line of B twice" (1131b3) and the fact that a man and his reward are not two quantities of the same kind—and therefore not best represented as segments of a continuous line—would indicate. It would thus appear that Aristotle's diagram of proportion consisted of parallel lines—the only other diagram, that with a continuous line, not being admissible here—either horizontal or vertical.

Several considerations point to horizontal lines. Ἄνω, κάτω, and ὑπό are frequently used of the scale of predication; and, although not derived from any actual figure—their connection

found in Euclid, bk. VII-IX. But the doctrine of proportion was applicable to all quantities, and not merely to number alone (cf. p. 158, n. 37, *supra*); and, in accordance with this, the letters in book V, representing μεγέθη, receive the neuter article. We may suppose, then, that Aristotle, in using the neuter, chose the more general form of expression, the neuter having the advantage of not indicating any definite kind of quantity, such as a number or line.

<sup>69</sup> Plato, *Theaet.* 147d, cf. *Meno* 82c-85b; Ar., *Met.* I 1052b33.

<sup>70</sup> *Rep.* 509d. Plato's line was, however, probably vertical: cf. 511de.

<sup>71</sup> *E. N.* 1131b1-3. There are two readings here, ἡ τοῦ α, and ἡ τοῦ πρώτου. The phrase ἡ τοῦ α cannot be paralleled in mathematical writings, nor for that matter can ἡ τοῦ πρώτου. We should probably read ἡ τοῦ α with Bywater, and translate "the line belonging to (the term) A. Cf. also 1132a29 τὸ δ' ἴσον μέσον ἐστὶ τῆς μείζονος καὶ τῆς ἐλάττωτος κατὰ τὴν ἀριθμητικὴν ἀναλογίαν, where the feminine shows that Aristotle has line in mind.

<sup>72</sup> Ἐὰν ἡ τοῦ β τεθεῖ δις. For κείμει (= passive of τίθμι) used in the sense of "being set out in a diagram" (= ἐκκεῖται) cf. Euclid, *Optica*, pp. 28, 3; 42, 8 [Heiberg].

with Platonic terminology is evident<sup>73</sup>—they would suggest that a diagram in illustration of such a predication would be most suitable if it could represent the figurative *ἄνω* as literally above, and similarly with *κάτω* and *ὑπό*. Again, it has been seen that the horizontal form is probably the original.

We may then reasonably conjecture that the form of the diagrams was that of horizontal lines of varying length placed one above the other, the longer line representing the *μείζων ὅρος*, the shorter the *ελάττω*, and that the diagrams for the three figures were as follows:<sup>74</sup>

First Figure	Second Figure	Third Figure
A <u>major</u>	(A)M <u>middle</u>	(A)Π <u>major</u>
B <u>middle</u>	(B)N <u>major</u>	(B)P <u>minor</u>
Γ <u>minor</u>	(Γ)Ξ <u>minor</u>	(Γ)Σ <u>middle</u>

There is a difficulty in the presentation of negative and particular predication, but we may suppose that for the purpose of a diagram, all predication was considered to be that of a predicate as a whole of a subject as a part, and that therefore the predicate would be represented by the longer line.<sup>75</sup>

Confirmation of the use of such a diagram can be gathered from the discussion in *An. Pr.*, II, 8-10, where the conversion of syllogisms in all three figures is discussed, the process being to take the contrary or contradictory of the conclusion (thus "converting" it) and one of the premises, and thus obtain a new conclusion contradictory or contrary to the remaining premise. In the first figure the lettering is: A, major; B, middle; Γ, minor; in the second: A, middle; B, major; Γ, minor; in the third: A,

<sup>73</sup> Cf. Maier, *Syllogistik*, II, 1, p. 379.

<sup>74</sup> For MNΞ for the terms in the second figure, and ΠPΣ for those in the third, cf. *An. Pr.*, I, 5, 6; for ABΓ for the terms in these figures cf. *ib.*, I, 10, 11, 17-22.

<sup>75</sup> Cf. the use of *κατηγορῶ* (properly of affirmative predication) for predication in general, and the remarks on *σχῆμα*, p. 169, *infra*. Cf. also the use of *συνάπτω*, *κατηγορία*, and *κατηγορῶ* to represent both negative and affirmative predication in *An. Pr.* 41a12, 15. For particular assimilated to universal predication compare the descriptions of the three figures, *An. Pr.* 25b32-34, 26b34-36, and 28a11.

major; B, minor; Γ, middle. All three figures could be represented by the same lettering in the same diagram:

A \_\_\_\_\_  
 B \_\_\_\_\_  
 Γ \_\_\_\_\_

In the first figure from the premises AB, BΓ, we obtain the conclusion AΓ; in the second, from AB and AΓ, the conclusion BΓ; and in the third from AΓ and BΓ, the conclusion AB.<sup>76</sup>

It has been suggested<sup>77</sup> that σχῆμα in the sense of syllogistic figure is derived from the diagrams used to illustrate the figures of the syllogism. If, as indicated above, the diagram was the same for all three figures, the origin of the term must be sought elsewhere.

The figures, as has been shown, are derived from the predicative relation of the middle to the extremes, and Aristotle consistently uses σχῆμα of this relation, whether the mood happens to be valid or not: thus, when the middle is predicated affirmatively or negatively of both extremes, or affirmatively of the one and negatively of the other, we are said to have the second figure,<sup>78</sup> although the mood with two affirmative premises is invalid. Σχῆμα is elsewhere used in the *Organon* of the linguistic expression, or ἐρμηνεία, of an idea or truth: thus, as examples of paralogism παρὰ τὸ σχῆμα τῆς λέξεως are given the expression of a (real) masculine as (grammatically) feminine, or vice versa, or of one category as another.<sup>79</sup> Similarly, ὁμοιοσχήμονες is used of premises of the same quality or matter.<sup>80</sup> The same meaning of σχῆμα probably occurs in the phrases τὰ σχήματα τῆς κατηγορίας or τῶν κατηγοριῶν, whether we take

<sup>76</sup> The same lettering for the three figures is also found in the passage on false premises and conclusions (*An. Pr.*, II, 2-4), and that on circular proof (*ib.*, II, 5-7.)

<sup>77</sup> Ross, *Aristotle*<sup>2</sup>, p. 33.

<sup>78</sup> *An. Pr.* 26b34-36 with Waitz' note.

<sup>79</sup> Cf. *Soph. El.* 166b10-19.

<sup>80</sup> For ὁμοιοσχήμων referring to quality cf. the passages in Bonitz, *Index*, 511b11-13, and *An. Pr.* 25b20 f., where it is said of ἐνδέχασθαι μηδενί or τινὶ μὴ ὑπάρχειν, καταφατικὸν ἔχει τὸ σχῆμα (cf. *ib.* 32a32); for the word referring to the same matter cf. *ib.* 32b37, where there is a v. l. ὁμοιοσχήμων (for ὁμοιοσχημόνων). Cf. also Bonitz, *Index*, 740a18-20.

κατηγορία here as predication or "naming,"<sup>81</sup> for both procedures are hermeneutic.<sup>82</sup> In the same way the figures are hermeneutic and result from our predicating the middle of both the extremes, or both extremes of the middle, or the major of the middle, and the middle of the minor.<sup>83</sup>

The mathematical terminology in the syllogism is accompanied by many mathematical procedures and turns of phrase in the two *Analytics*, and especially in the first. Aristotle is fond of stating the converse of a rule;<sup>84</sup> he uses the *reductio ad absurdum*, with the attendant mathematical phraseology;<sup>85</sup> he often uses *ὑπόκειται* in its mathematical sense of "it was assumed";<sup>86</sup> and finally, the whole first part of the *Prior Analytics*, treating of the three figures of the syllogism, and contingent, necessary, and assertoric proof, is modelled on the

<sup>81</sup> For the disputed interpretation of the term cf. Ross, *Aristotle's Metaphysics*, Introduction, pp. lxxxiii-lxxxv.

<sup>82</sup> Cf. the discussion of the categories in *Soph. El.* 166b10-19 and *ib.* 168a25 f., 170a15.

<sup>83</sup> Cf. *An. Pr.* 41a13-20: *εἰ οὖν ἀνάγκη μὲν τι λαβεῖν πρὸς ἄμφω* (the two terms to be connected by the syllogism, i. e. the extremes) *κοινόν* (if there is to be a syllogism), *τοῦτο δ' ἐνδέχεται τριχῶς* (ἢ γὰρ τὸ Α τοῦ Γ καὶ τὸ Γ τοῦ Β κατηγορήσαντας, ἢ τὸ Γ κατ' ἄμφοιν, ἢ ἄμφω κατὰ τοῦ Γ), *ταῦτα δ' ἐστὶ τὰ εἰρημένα σχήματα, φανερόν ἐστι πάντα συλλογισμὸν ἀνάγκη γίνεσθαι διὰ τούτων τινὸς τῶν σχημάτων. ὁ γὰρ αὐτὸς λόγος καὶ εἰ διὰ πλείονων συνάπτοι πρὸς τὸ Β: ταὐτὸ γὰρ ἔσται σχῆμα καὶ ἐπὶ τῶν πολλῶν.* In the last line *σχῆμα* appears to indicate the connection by predication of the middle with both terms. For the objections to the interpretation of the word here as "figure" cf. Maier, *Syllogistik*, II, 1, p. 220, n. 2.

<sup>84</sup> *An. Pr.* 28a1, 29a2, 26a14 etc.

<sup>85</sup> Cf. *ἔπερ ἀδύνατον* *An. Pr.* 65a9, *ἔπερ ἀδύνατον* *An. Post.* 92b28 with Euclid's *ἔπερ ἀδύνατον* (I, p. 182, 9; II, p. 146, 6 [Heiberg]) and *ἔπερ ἄτοπον* (I, p. 200, 20). It is from this mathematical use of *ἀδύνατον* that the expression *ἀπαγωγή εἰς ἀδύνατον* is derived. Cf. *ἔπερ ἀδύνατον* in mathematical passages: *De Caelo*, 301a33, *Meteor.* 376b3.

<sup>86</sup> Chiefly in the form *ὑπέκειτο* cf., e. g., *An. Pr.* 27b1, 19, 34b5, 28b27, 70b16 (where it is used synonymously with *δίδωμι*, as Bonitz [*Index*, 194a38] has noticed), though *ὑπόκειται* occurs 34a31, 52b24. For the mathematical use cf. Sir T. L. Heath, *The Works of Archimedes*, p. clxxxiii, Euclid (where both *ὑπόκειται* and *ὑπέκειτο* occur), I, p. 114, 26; I, p. 296, 24; II, pp. 18, 18; 20, 17; 54, 18; 96, 16, 20, 24; 206, 6; 256, 6; II, p. 232, 2; III, pp. 46, 6, 17; 62, 1; 110, 6 (Heiberg), and Hippocrates as quoted or paraphrased by Eudemus, Rudio, *op. cit.*, pp. 58, 17; 64, 12 etc.

procedure of mathematical proof.<sup>87</sup> First come the definitions, as in the two earliest preserved mathematical authors, Autolycus and Euclid;<sup>88</sup> after them the fundamental theorems of conversion, which are to be used in reducing the second and third figures to the first, thus establishing their validity; next the exposition of the first and perfect figure, with proof furnished by the *dictum de omni et nullo* and appeal to intuition, and after these the second and third figures, and necessary and contingent matter.

Besides the similarity of method, there is a striking resemblance between the language of the *Prior Analytics* and that of the Greek mathematicians. Take for instance a characteristic passage (31a18 ff.):

ἐν δὲ τῷ τελευταίῳ σχήματι καθόλου μὲν ὄντων τῶν ὄρων πρὸς τὸ μέσον καὶ κατηγορικῶν ἀμφοτέρων τῶν προτάσεων, ἂν ὁποτερονοῦν ἢ ἀναγκαῖον, καὶ τὸ συμπέρασμα ἔσται ἀναγκαῖον . . . ἔστωσαν γὰρ ἀμφοτέραι κατηγορικαὶ πρῶτον αἱ προτάσεις, καὶ τὸ Α καὶ τὸ Β παντὶ τῷ Γ ὑπαρχέτω, ἀναγκαῖον δ' ἔστω τὸ ΑΓ. ἐπεὶ οὖν τὸ Β παντὶ τῷ Γ ὑπάρχει, καὶ τὸ Γ τινὶ τῷ Β ὑπάρξει διὰ τὸ ἀντιστρέφειν τὸ καθόλου τῷ κατὰ μέρος. ὥστ' εἰ παντὶ τῷ Γ τὸ Α ἐξ ἀνάγκης ὑπάρχει καὶ τὸ Γ τῷ Β τινι, καὶ τῷ Β τινὶ ἀναγκαῖον ὑπάρχειν τὸ Α. τὸ γὰρ Β ὑπὸ τὸ Γ ἐστίν. γίνεται οὖν τὸ πρῶτον σχῆμα. ὁμοίως δὲ δειχθήσεται καὶ εἰ τὸ ΒΓ ἐστὶν ἀναγκαῖον κτλ.

The first sentence here corresponds to Euclid's enunciation of the thing to be proved.<sup>89</sup> The proof begins, as often in Euclid, with the third person imperative *ἔστωσαν*<sup>90</sup> and the assigning of letters to the elements under discussion. For Aristotle's *ἐπεὶ οὖν* there are many parallels in Euclid, where it introduces the

<sup>87</sup> Cf. Philoponus, in *An. Pr.*, p. 10, 28 (on 24a11): *μιμῆται κὰν τοῖς ἐνταῦθα ὁ Ἀριστοτέλης τὴν γεωμετρικὴν διδασκαλίαν· ὥσπερ γὰρ ἐκεῖνοι προλαμβάνειν εἰώθασι θεωρηματά τινα συμβαλλόμενα αὐτοῖς πρὸς τὰ δειχθησόμενα, οὕτω καὶ αὐτὸς ἐνταῦθα τὰ ἐσόμενα αὐτῷ χρήσιμα πρὸς τὴν τῶν συλλογισμῶν διδασκαλίαν προλαμβάνει.*

<sup>89</sup> Euclid, *Elem.*, I, vol. I, pp. 2-8 (Heiberg); Autolycus, p. 2, 48 (Hultsch).

<sup>90</sup> Cf. Euclid *passim* and Sir T. L. Heath, *op. cit.*, I<sup>2</sup>, p. 129.

<sup>90</sup> Cf. Euclid, *Elem.*, I, 18 (vol. I, p. 46, 4 [Heiberg]), I, 20 (vol. I, p. 48, 9 [Heiberg]) and *passim*. This usage may be as old as Hippocrates of Chios (cf. Rudio, *op. cit.*, p. 58, 5.).

proof proper after the *ἐκθεσις* or assignment of the general elements of the enunciation to particular elements, diagrams with letters of the alphabet.<sup>91</sup> Compare also *ὁμοίως δὲ δειχθήσεται* (31a31) with Euclid's *ὁμοίως δὲ δειχθήσεται*<sup>92</sup> and other variants.

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<sup>91</sup> Cf. Euclid, *Elem.*, I, 2 (I, p. 14, 5); I, 5 (I, p. 20, 15); I, 14 (I, p. 38, 16); I, 16 (I, p. 42, 17); I, 20 (I, p. 48, 15) and *passim*.

<sup>92</sup> *Elem.*, I, 15 (I, p. 40, 21); IV, 3 (I, p. 276, 25); X, 31 and 32. Cf. also Autolycus p. 74, 23; 122, 1 (Hultsch). Variants are *ὁμοίως δὲ δείξομεν* (*Elem.*, I, 20; V, 6; XIII, 14; I, 17). Even *ὁμοίως δὲ δειχθήσεται* occurs (X, 1). Cf. also [Aristotle], *Mechanica*, 854b35.

## ON TWO PASSAGES OF CICERO REFERRING TO LOCAL TAXES IN ASIA.

When Cicero reached his province in 51 B. C. he wrote to his friend Atticus (*ad Att.*, V, 16, 2): *audivimus nihil aliud nisi imperata ἐπικεφάλια solvere non posse; ὧν ὅς omnium venditas; civitatum gemitus, ploratus.*

In this passage Cicero tells of the conditions he discovered when he succeeded Appius Claudius as governor of Cilicia and held assizes in the three Asiatic dioceses of Laodiceia, Apameia, and Synnada. It is with the interpretation of the phrase ὧν ὅς *omnium venditas* that we are especially concerned. Mommsen<sup>1</sup> assumed that the passage referred to taxes levied by the Roman government and interpreted ὧν ὅς to mean the delinquent taxes which had been sold to a collector. Tyrrell<sup>2</sup> followed Mommsen's lead for the most part but, being troubled by his failure to find a parallel for this meaning of ὧν ὅς, suggested that it meant either 'investments' or 'tools,' the latter of which would be an unprofitable exaction indeed. More recently the view has been advanced<sup>3</sup> that the passage refers to taxes levied by cities upon their citizens, even though the sums collected were to be handed over to pay demands made by Roman officials or by the Roman government. This system of local collection was probably established by Pompey in his new provinces, and in Asia and the Asian districts attached to Cilicia in 56 may date from the activity of Lucullus. This view agrees with the earlier interpretation<sup>4</sup> that the cities had mortgaged their revenues in order to pay the amounts levied upon them. I wish to suggest that on the contrary ὧνή is used here in its regular Greek sense of a contract for the collection of revenues and, since this was regularly in the form of a sale of the right to collect these revenues, the word *venditas* is merely a translation into Latin of the rest of the Greek phrase.

This is the meaning of ὧνή in Andocides (*De Myst.*, 92: *πριάμενος ὧν ἔκ τοῦ δημοσίου*), in many inscriptions, and par-

<sup>1</sup> *Rom. Hist.*, IV, p. 158, note.

<sup>2</sup> *Correspondence of Cicero*, III<sup>2</sup>, pp. 69, 103-104, 328-329.

<sup>3</sup> Dessau, *Gesch. d. Kaiserzeit*, I, p. 151; Frank, *Econ. Survey*, I, p. 344.

<sup>4</sup> Frank, *Rom. Imperialism*, p. 328, note 22.

ticularly in an important Ephesian inscription of 85 B. C. (Ditt., *SIG*<sup>3</sup>, 742, line 35): εἰ δέ τινες ἐνεισιν ἐν ταῖς ἱεραῖς μισθώσεσιν ἢ δημοσίαις ὄναις, i. e. any who are listed as having leased the sacred lands of Artemis or as having contracted to collect the public revenues of Ephesus. Wilhelm's note adds: *notum est de ea re Graecos numquam locationis conductionis (μισθοῦν μισθοῦσθαι) sed semper emptionis venditionis (πωλεῖν ὠνεῖσθαι) vocabulis uti*,<sup>5</sup> and Rostovtzeff's discussion in *Gesch. d. Staatspacht*, p. 5, supports the same conclusion. A close and convincing parallel to Cicero's phrase occurs in an inscription of Olbia (Ditt., *SIG*<sup>3</sup>, 495, line 50, c. 230 B. C.): τῶν ἀναπραθείσας τῆς ὥνης, and indicates that Cicero's *venditas* is really a translation of some such form as *πραθείσας*. Cicero's reference in this same connection in *Fam.*, III, 8, 5 to a *venditio tributorum* gives added support to our theory that these were local tax contracts in the Greek form, for the analogy of *Pro Flacco*, 20 shows that local levies of the cities themselves were called *tributa*.<sup>6</sup> The phrase therefore means that the local tax contracts of all <sup>7</sup> the cities have been let, and the gist of the complaint to Cicero was as follows: The cities told Cicero through their representatives that they could not pay the poll-taxes which the demands of Appius (*Fam.*, III, 7, 2) had made necessary, and since the contracts for their revenues had been let no new revenues beyond the sums named in the contracts could be expected. From *Fam.*, III, 8, 5 we gather that the contracts were let upon difficult terms and from *XV*, 4, 2 that Cicero,

<sup>5</sup> Festus, 516L says that *censurum locationes* were called *venditiones* in early Latin *quod vel <ut fr>uctus locorum publicorum venibant*. But the frequent use of *vendere* in connection with the Sicilian contracts, e. g. *Verr.*, II, 3, 123, probably reflects only the Greek usage inherited from the law of Hiero. The tithes of Asia were let *censoria locatione*, *Verr.*, II, 3, 12, and the contracts are referred to by Appian as *μισθώσεις*, *Bell. Civ.*, II, 13. Cicero's use of a Greek word and the fact that the reference is to Greek cities favours my interpretation of his phrase.

<sup>6</sup> *In aerario nil habent civitates, nihil in vectigalibus. Duae rationes conficiendae pecuniae, aut versura aut tributa.*

<sup>7</sup> Cicero has been receiving deputations from cities and goes on to speak of their lamentations. It seems preferable therefore to explain *omnium* as *all the cities* rather than with Tyrrell as *all the individual debtors*.

through his right as provincial governor to interfere in the finances of all but free cities, managed to give them some relief.

Cic., *Pro Flacco*, 91: *At fructus isti Trallianorum Globulo praetore venierant; Falcidius emerat HS nongentis milibus. Si dat tantam pecuniam Flacco nempe idcirco dat ut rata sit emptio. Emit igitur aliquid quod certe multo pluris esset.*

This passage has regularly been interpreted as referring to contracts for the collection of the tithe in the territory of Tralles,<sup>8</sup> on the ground that *fructus* is not likely to refer to local revenues. It is true that most examples of the use of the word in connection with returns from taxes do refer to imperial revenues, to the tithe, to the port-dues, and the pasture-tax, and, in one case, to all the revenues of the Roman people.<sup>9</sup> But its meaning seems really to be so applicable to returns of any kind that it can very properly be thought to refer to the revenues of Tralles,<sup>10</sup> which was a wealthy commercial city with a considerable territory. Moreover, the repetition of the words for buying and selling in the passage quoted above supports the view that it refers to contracts for the collections of the local revenues of a Greek city.

Falcidius had purchased the right to collect these revenues in 63. Flaccus, the proconsul of 62, was charged with interfering with the contract and demanding a bribe of fifty talents before ratifying it. If these were contracts for the collection of the tithe it is difficult to see what right the proconsul would have to interfere with them, since they were made by the censors at Rome. His duty consisted rather in protecting the provincials against extortion.<sup>11</sup> On the other hand the record of Cicero in Cilicia

<sup>8</sup> *Pro Flacco*, ed. Webster, p. 104; ed. Du Mesnil, p. 203.

<sup>9</sup> *Leg. Agr.*, II, 83; *Pro Lege Man.*, 15; *De Domo*, 60.

<sup>10</sup> Cf. *Pro Flacco*, 20, which shows that the cities had their own *vectigalia*.

<sup>11</sup> One might argue that Verres in Sicily interfered with contracts made in Rome and that no point was made of it by the prosecution, but in this case a distinction must be kept clearly in mind. In Sicily only the leases for the rent of the *ager publicus* were let by the censors at Rome, *Verr.*, II, 3, 13; the renters on this land were not only liable for the rent according to the censorial contract but, like nearly all the rest of Sicily, to the payment of the tithe as well, the contracts for which were let in Sicily itself according to the *Lex Hieronica*. Verres, so

yields ample evidence of the right of the proconsul to review the local financial arrangements of the cities,<sup>12</sup> to do, in fact, what Flaccus seems to have done at Tralles. From Cassius Dio (XXXVII, 9), however, we learn that the censors of 65 so checked each other and that their successors in 64 were so checked by the tribunes that they retired from office with none of their business completed. As part of that business was the leasing of the Asiatic revenues, it is inferred that the proconsuls of Asia had to make what arrangements they could for the collections during the next quinquennium. The passage of Dio seems to me of dubious value because it is difficult to see why political disputes in the capital should have prevented the performance of such a routine duty. Furthermore, the publicans in asking for a remission of their contracts in 61 were acting in accordance with the terms of the Sempronian law.<sup>13</sup> On the whole, therefore, the evidence we have favours the view that Cicero in the passage quoted above was referring to the local revenues of Tralles. If this is true, we have here a clear example to show that the Roman knights were extending their activities from the collection of imperial to the collection of local revenues,<sup>14</sup> and Tralles with its large population of resident Romans<sup>15</sup> was an especially likely place. We gain also a useful indication of the amount of the public income about the middle of the first century B. C. of a fairly large and important city in the province of Asia.

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far as I know, interfered only with the arrangements for the payment of the tithe on such land, e. g. at Leontini, *Verr.*, II, 3, 47; 97; 104; and esp. 109-117; cf. Frank, *J. R. S.*, XVII (1927), p. 144.

<sup>12</sup> *Fam.*, XV, 4, 2; *Att.*, VI, 2, 5; VI, 1, 15-16. Tralles probably lost its status as a free city after its defection to Mithridates, cf. Head, *Hist. Num.*<sup>2</sup>, p. 660.

<sup>13</sup> *Att.*, I, 17, 9; *Schol. Bob.*, Stangl, 157.

<sup>14</sup> Cf. Frank, *Econ. Survey*, I, p. 344. Could the phrase *tributa exigere* in *Quint. Frat.*, I, 2, 6 and Quintus' assumption that he had the right to deal with the collector indicate another instance?

<sup>15</sup> *Pro Flacco*, 71.

## NOTES ON THE EPINOMIS.

There are several cases in the *Epinomis* where the scribe seems to have allowed a neighboring word to replace wholly or partly the one that he should have written. If there is a flaw in sense or construction and at the same time a repeated word or syllable, the text is probably corrupt. In such cases my suggestions are at best plausible guesses. At 978e 1 read *ιδέαν* for *ήμεραν*, which is a mistaken anticipation of *ήμερῶν* 23 letters later. The moon displays always another shape, not another day.<sup>1</sup> At 976b 1 the *φιλ* of *προσφιλές* derives from *φιλίαν* 11 letters before. I suggest *προστιχές*. Knowledge of the temper of the wind is a necessity, not a mere hobby of the pilot. At 987d 9 *λάβωμεν* looks like an anticipation of *παραλάβωσι*. The variant *παραλάβωμεν* strengthens the view that we have here a conflation. I suggest *τιθῶμεν*, *μάθωμεν*, *ὀρῶμεν*. At 990a 8 *τῶν ὁκτὼ περιόδων τὰς ἑπτὰ περιόδους* can hardly be right. I suggest *τὰς ἑπτὰ διαφοράς*. Compare *Timaeus* 43e, *διαφορὰς τῶν κύκλων* (so *pr.* A, *διαφθορὰς* A<sup>2</sup>F), and Plutarch *Plat. Quaest.* 1007a, *τῶν ὁκτὼ σφαιρῶν διαφορὰς*.

Confusion of endings, due to the use of compendia, is even commoner in the *Epinomis* than in the *Laws*. At 986c 4f. there is not much point in *κόσμον ὃν ἔταξεν λόγος ὁ πάντων θεϊότατος ὁρατόν*. Rhythm and sense are much better if we read *κόσμον ὃν ἔταξεν λόγος ἀπάντων θεϊότατον ὁρατῶν*.

Omissions due to haplography explain many difficulties. At 978c 3 *οὐδ'* is strange. "Nature has been present with many other animals not even to the point of being able to count." But there are no animals except man that can count, and even this would be a high attainment. Read *πολλοῖς δὲ ἄλλοις αὐ τῶν ζῴων οὐδ' ἐσι* *εἰς αὐτὸ τοῦθ' ἡ φύσις παραγέγονεν*. At 987a 4f *ἀπόπροσθεν* is rather a monstrous nonce-word. More plausible is *ἀποπρόσθεσιν*, "absence of obstructions"; this word would be related to *ἐπιπρόσθεσιν*, "occultation," as *ἀποδημέω* to *ἐπιδημέω*. Otherwise a word may have been lost, such as *θέαν*, *ὄψιν*, *αἰθρίαν*, *εὐδίαν*.

The following emendations assume a slight mistake followed by attempts at correction or other small errors. At 974b 2 *ταύτης*

<sup>1</sup> This suggestion was made by Bury in the Loeb edition.

was written for *τοιούτης* and *τῆς* was added to form the connection with *δυνάμεως*. But one no more says "some this power" in Greek than in English. We want "some such power." Read then *ὡς οὐσης τινὸς ἐκάστοις τοιούτης δυνάμεως*. At 978c 7 *εἴτα εἰς* arose from the mistaken division of *εἴτ' αἰεί*. Furthermore *ἐλθόν* and *ἔχον* for *ἔλθοι* and *ἔχων* are very slight changes in a text as corrupt as that of the *Epinomis*. By these substitutions we obtain something with a Platonic ring: *ὦν τί κάλλιον ἐν ἐνὸς ἂν τις θεάσαιο πλὴν τὸ τῆς ἡμέρας γένος, εἴτ' αἰεὶ τὸ τῆς νυκτὸς ἐλθὼν μέρος ἔχον ὅψιν ὅθεν ἕτερον πᾶν αὐτῷ φαίνοιτ' ἂν*; It is the constant succession of day followed by the totally different aspect of night that excites admiration. The pointlessness of the manuscript reading arouses suspicion.

The following suggestions presuppose slight errors of the usual sort. At 978c 1 for *παντός* read *πλάσαντος* or *πατρός* or *ποιήσαντος*. Plato would hardly speak of the creator as "the all." At 979a 5 the absurdity of *ἤρξατο* is apparent. It must be men who began to compare numbers when the creator put the moon in the heavens. Surely the creator did not need to learn arithmetic from his own creation. In Ven. 188 the reading is *ἤρξαντο*, but a better solution is provided by *ἤρξε τό* or *ἤρξε τοῦ*, which latter I should read.

The following involve new information from the manuscripts.<sup>2</sup> At 979c 3 the reading of O<sup>2</sup> is really *χρηστὰ λεγόμενόν τε* (*τὸ notatum punctis*). There may be a slight omission. Read *καὶ τὰ μὲν ἄλλα αὖ πάντα κτᾶσθαι χρηστὰ λεγόμεν<α οἷ>όν τε κτλ.* "And again all other things to which the term good is applied may be acquired," etc. This is more probable than the correction in Ven. 188 *ὃ λέγομεν* for *λεγόμενόν τε*. At 988c 2 the words *καὶ ὁ μὲν* are marked for expunction in O. There is no reason to

<sup>2</sup> Since my statement of the readings of O in *A. J. P.* XLIX (1928), pp. 369 f., I have made a more careful examination of O and my notes will be used, I believe, by the Budé editor. I have published the readings of Ven. 188 in my monograph, *The Vatican Plato and its Relations*, American Philological Association, Middletown, 1934, pp. 105-107. There are mistakes. On page 106, line 11 read 977e 1 (not c). On page 707, line 5 read 979b 3 (not 977). I might have noted that Burnet's reading is found in the text of Ven. 188 at 988c 6 and as a correction at 992d 6. This part of Ven. 188 is in a later hand but probably derives from a destroyed gather in the older hand, since it frequently agrees with Z, which is a copy of Ven. 188.

suppose that they are anything but a false start for καὶ ὁ — μετ—. At 990c 6 the reading of Bekker (*om. καί*) is found not only in Z but as a correction in Ven. 187. The agreement of these two points to a correction in Ven. 188, which justifies expunction of the second καί in this line. At 991c 5 the reading of O<sup>2</sup> is really βάσανος ἂν ὀρθῶς γίγνεται (*-θρωποις notatum punctis*). Vat. 1031 corrects this to ἂν ὀρθῶς γίγνηται. I should read πάντων γὰρ καλλίστη καὶ πρώτη βάσανος <οἷς> ἂν ὀρθῶς γίγνηται. The reading ἀνθρώποις might well come from an omitted οἷς inserted above ἂν.

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## A NEW DATE IN THE FIFTH CENTURY.

In the *Constitution of Athens* (§ 47, 4) Aristotle describes the procedure for leasing sacred properties: the King Archon brought in the list of rentals to the Boule; the rentals were made for periods of ten years; and the payments were due each year in the ninth prytany. This constitutional procedure finds illustration in the provisions made in 418/7 for the leasing of the precinct of Neleus and Basile, and the inscription (*I. G.*, I<sup>2</sup>, 94) in which these regulations have been preserved is cited, of course, in the modern commentaries on Aristotle. The procedure is essentially that which Aristotles describes, in spite of the fact that the inscription was cut almost a century before his treatise was written. The significant part of the document is in lines 11-18: the King Archon, with the poletai, was to lease the precinct of Neleus and Basile for twenty years according to the regulations; the lessee was to enclose the sanctuary of Kodros and Neleus and Basile at his own expense, and pay down to the apodektai in the ninth prytany the amount of rental which the precinct brought in each year; and the apodektai were to pay this over to the treasurers of the Other Gods according to the law.

It is clear that the normal time for leasing sacred properties must have been the ninth prytany, for this was the end of the fiscal year, so far as the precinct rentals were concerned, and a strong presumption is thus created that the Athenian decree *I. G.*, I<sup>2</sup>, 94 should be dated, actually, in the ninth prytany of the year. There are other considerations which lead to the same conclusion, and they deserve rather more attention than they have hitherto received.

The decree was passed in the prytany of Pandionis (line 2), and it contains the provision that the King Archon, or anyone else who does not carry out its terms, shall be subject to penalties at the time of his scrutiny in the prytany of Aigeis (line 19). The fact that during the prytany of Pandionis the name of the succeeding prytany was known shows that Pandionis was ninth and Aigeis tenth in the allotted order of the year. During the first prytany one would have a chance of only one in nine of guessing the name of the second prytany; during the second

prytany he would have a chance of one in eight of guessing the name of the third prytany—and so on; only during the ninth prytany could the name of the succeeding prytany be known. The evidence for the sortition as here outlined was first gathered by Ferguson,<sup>1</sup> and his conclusions have been restated by Brillant in his booklet *Les Secrétaires Athéniens* (pp. 23-24).<sup>2</sup> The actual naming of any succeeding prytany, as Aigeis is named in line 19, shows the designated prytany to be the tenth and the prytany during which the decree was passed to be itself the ninth.

This determination has an interesting bearing upon the records of state expense in 418/7, for it is now possible to date definitely the last borrowed stipend of the year (*I. G.*, I<sup>2</sup>, 302, lines 17-20), which was given to Nikias and two colleagues in the early summer of 417.<sup>3</sup> The formula of date has most recently been restored as [*Ἐπὶ τῆς .....<sup>18</sup>..... α*] *τῆς πρυτανείας*, but with some uncertainty as to whether the prytany was really the ninth or the tenth. It is clear, however, that [*Ἐπὶ τῆς Αἰγείδος δεκά*] *τῆς* does not fill the lacuna and that [*Ἐπὶ τῆς Πανδιονίδος ἐνά*] *τῆς* does; so the correct restoration of *I. G.*, I<sup>2</sup>, 302, line 17, begins with the latter formula, and the payment is thereby definitely dated on the thirteenth day of the ninth prytany.

Returning for a moment to the text of *I. G.*, I<sup>2</sup>, 94, we find that the original probouleuma proposed a liability of one thousand drachmai if the delegated parties did not carry out the provisions of the decree before the end of the current Boule (lines 9-11). The amendment proposed a liability of ten thousand drachmai (line 20) in the prytany of Aigeis. Here is another link to add to those already discovered which bind the civil year of the archon's term to the conciliar year of the Boule, and which show the nature and extent of the difference between them. The important phrase is found in lines 19-20: *ἐπὶ τῆς Αἰγείδος πρυτανείας εὐθυνέσθω μυρία δραχμῶσιν*. It is obvious that the scrutiny of the King Archon could come only after the com-

<sup>1</sup> *The Athenian Secretaries*, pp. 19-27.

<sup>2</sup> I have given the normal procedure. Only rarely, as in 408/7, is there any evidence for a determination in advance for the entire year.

<sup>3</sup> The text is given in Meritt, *Athenian Financial Documents*, pp. 160-161. The lines are there numbered 18-21.

pletion of his term of office at the end of the month Skirophorion; and if the verb εἰθυνέσθω here means anything, it means that the King Archon was to be liable at his euthyna to the fine specified if he had not actually leased the sacred properties. It follows inevitably that some part of Hekatombaion of the new civil year 417/6 when Euphemos was archon—and when the retired King Archon would be available for his euthyna—must have come before the end of the tenth prytany, held by Aigeis, of the conciliar year 418/7.

The validity of the correspondence between the civil and conciliar years as given in *Athenian Financial Documents* (p. 176), whereby Pryt. I, 1 of 417/6 is equated with Hekatombaion 9, is thus confirmed, and this relative disposition of the two types of year in the summer of 417 may now take its place with the other fixed points upon which every study of the Athenian calendar must be based.

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## THE PUBLII LUCILII GAMALAE OF OSTIA.

The Publii Lucilii Gamalae were for at least a century and a half prominent citizens of Ostia. The earliest known member of the family is a *duumvir* of 19 A.D.<sup>1</sup> The most important records of the family are two long honorary inscriptions, *C. I. L.* XIV, 375 and 376, each set up to commemorate the career and public benefactions of a *P. Lucilius P. f. P. n. P. pron. Gamala*.<sup>2</sup> One of these inscriptions, no. 376, is certainly later than 161, for it mentions the restoration of *thermae quas divus Pius aedificaverat*. I shall consider later the question of a more exact date for it. The other, no. 375 (Dessau, 6147), known only on manuscript authority, has no definite indication of date beyond the fact that it was found at Portus.<sup>3</sup> It should therefore be dated after work on Claudius' harbor had begun in 42 A.D. There has been long-continued controversy as to whether the two inscriptions belong to the same man. While there are some extraordinary correspondences in the careers and benefactions recorded, there are equally striking differences. The similarities and the divergencies in the two documents can best be explained if we assume that they record the careers of two men in this prominent family, the latter of whom had a municipal career much like that of his predecessor and followed his example in building and restoring many public monuments.<sup>4</sup>

<sup>1</sup> *C. I. L.* XIV, 244 (= 4534). The name appears as *P. Lucilius Gamala*. Another *duumvir* of the family (undated) is recorded in no. 340. Other inscriptions besides the two discussed in this paper are nos. 244, 377 (cf. 409), 4657, 4658.

<sup>2</sup> For recent bibliography on these inscriptions see *C. I. L.* XIV, Suppl. (1930), p. 615 and Wickert's additional notes, Suppl. Fasc. II (1933), p. 844, 1; 854, 1; 840, 2. The most exhaustive discussion of the inscriptions is that of Carcopino, *Mél. Arch. Hist.* XXXI (1911), pp. 143-230, in which many topographical questions are considered.

<sup>3</sup> The provenience has often been doubted because Ligorio is the earliest authority for it. But, as Carcopino has pointed out, *op. cit.* p. 207, the fact that it was in the gardens of Rodolfo-Pio di Carpi, who was for seven years bishop of Porto, provides strong reason for accepting the statement that it came from Porto.

<sup>4</sup> The reasons for believing that the inscriptions are records of two different men have been fully set forth by Carcopino. See especially p. 180.

If these Gamalae are different men, the dating of no. 375 presents a difficult problem. Scholars have found evidence for the date in the following passage in the inscription: [*H*]uic statua inaurata d. d. p. p. posita est, [*i*]tem aenea d. d. p. p. posita [*p*]roxume tribunal quest. [*propt*]erea quod cum res publica [*p*]raedia sua venderet ob pol[*l*]icitationem belli navalis, HS.  $\overline{XV}$  CC rei publicae donav[*it*]. If the tribunal quaest(or)is belonged to the quaestor Ostiensis, we should have in the year 44 A. D., when the office was abolished, a *terminus ante quem* for the tribunal.<sup>5</sup> But more probably the tribunal belonged to the local quaestor aerarii, the chief officer of the treasury of Ostia, for it was because of a contribution to a public fund that Gamala was honored with a statue near the tribunal.<sup>6</sup> In that case the reference to the tribunal gives no aid in determining the date of the inscription. Equally unsuccessful has been the attempt to date the *bellum navale*. Apparently the colony had promised for the *bellum* a certain contribution, to raise which public land would have had to be sold, had not Gamala, perhaps in combination with other citizens, intervened and offered a private gift. After 42 A. D. there was no maritime war in which Ostia would seem to have been actively concerned.<sup>7</sup> Moreover the contribution, 15,200 sesterces, is small for such a war. The suggestion of Cavedoni<sup>8</sup> that the *bellum navale* was a sham war, a *naumachia* such as was celebrated at intervals during the Empire, deserves more consideration than it has had. The *naumachia*, though it is nowhere else referred to as a *bellum navale*, is fre-

<sup>5</sup> This is the view of Carcopino, *op. cit.*, pp. 198 ff. Mommsen, *Ephem. Epig.* III, pp. 330 ff. suggested the restoration *tribunal quaes(itoris)*, against which the arguments of Carcopino seem to me convincing.

<sup>6</sup> A *tribunal* was not necessarily a place for judicial activity. It was properly nothing more than a platform from which an official addressed his public. See H. D. Johnson, *The Roman Tribunal* (1927), pp. 1 ff. As the head of the treasury in an important colony, the quaestor aerarii of Ostia may well have had occasion to address the public. Gamala's service as *curator pecuniae publicae exigendae et adtribuendae* indicates that he was, possibly at this time, closely associated with the city treasury.

<sup>7</sup> Neither Claudius' expedition to Britain, proposed by Carcopino, nor Marcus Aurelius' Marcomannic wars, suggested by Mommsen, provide a satisfactory explanation.

<sup>8</sup> *Bull. Arch. Nap. N. S.* VI (1858), pp. 195-6.

quently called a *proelium navale*; <sup>9</sup> if, as Cavedoni suggested, the spectacle lasted a number of days, it might properly have been called a *bellum*.

There is now a new piece of evidence which may provide a clue to the date of the inscription and the nature of the *bellum navale*. Among other building operations, this Gamala restored the chief temple of Ostia, that of Vulcan, a temple which the extensive excavations on the site have not yet brought to light. Gamala, who had held the office of *aedilis sacris Volkani faciundis* and was *pontifex* of the colony <sup>10</sup> (the usual title was *pontifex Volkani et aedium sacrarum*) had, perhaps as *pontifex*, restored at his own expense the most important temple of the colony. [*I*]dem aedem Volcani sua pecunia restituit are the words of the inscription. Now the *Fasti Annales* of Ostia regularly have in them details about the cult of Vulcan and the election of the *pontifices Volkani*. A recently discovered fragment <sup>11</sup> has the following record under the year 112 A. D.: XI K. SEPT. AEDIS · VOLKANI · VETUSTATE · CORRUPTA . . . NATO <sup>12</sup> OPERE · DEDICATA · EST. It seems very likely that this restoration was identical with the one made by the *pontifex*, P. Lucilius Gamala of no. 375.

We should then date the height of this Gamala's career under Trajan. His contribution to a *bellum navale* may have been made for the *naumachia* of Trajan recorded under 109 A. D. in the following entry of these *Fasti Annales*: III. ID. NOV. [*i*]MP. TRAIANUS · NAUMACHIAM · SUAM · DEDICAVIT [*in*] QUA · DIEB. VI PP. CXXVIIS. ET · CONSUMM. VIII K. DEC. Its duration of six days provides justification

<sup>9</sup> Augustus, *R. G.* IV, 43; Pliny, *N. H.* XXXIII, 63; Tac. *Ann.* XII, 56; Suet. *Iul.* 39; *Aug.* 43; *Tit.* 7.

<sup>10</sup> On these offices see Carcopino, *Virgile et les Origines d'Ostie* (1919), pp. 39-86.

<sup>11</sup> Calza, *N. S.* 1932, pp. 188 ff. For other fragments of the *Fasti Annales* see *C. I. L.* XIV, Suppl. 4533-4546, and Calza, *N. S.* 1934, pp. 247 ff.

<sup>12</sup> There is space for about twelve letters. Instead of Calza's suggested restoration . . . or]nato I would propose [*et refecta hare*]nato opere. On the use of *harenatum* (with which *opus* is probably to be supplied) in stucco coverings of walls see Vitruvius, VII, 167-170 and Pliny, *N. H.* XXXVI, 176. Cf. *calce harenato*, *C. I. L.* X, 1781.

for the use of *bellum* instead of *proelium* to describe it.<sup>13</sup> There is no evidence as to the site where the *naumachia* was held. I would suggest that it took place in the hexagonal basin which Trajan, in order to increase the port facilities of Rome, constructed at Portus two miles from Ostia. In holding a *naumachia* on a site which enabled the spectators to see an important new public work Trajan would have had a precedent in the great *naumachia* of Claudius held at the Fucine Lake before the opening of the emissary which was to drain the lake. In making gladiatorial combats a feature of a *naumachia* he also had a precedent in Claudius' spectacle in which gladiators fought on pontoons in the lake.<sup>14</sup> Trajan's *naumachia* preceded the dedication of the new harbor which, according to Strack's dating of the bronzes with representation of the *portus*, seems to have taken place in 113.<sup>15</sup>

<sup>13</sup> Bronzes of Trajan inscribed with the word NAUMACHIA and dating in Trajan's sixth consulship—that is 113 or later—are listed in the unreliable work of Mediobarbus, *Numismata Imperatorum Romanorum* (1730), p. 160. Their genuineness is questioned by Eckel, *Doctrina Numorum*, VI, p. 464. They are not listed in Paul L. Strack's exhaustive study of the coinage of Trajan, *Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts* (Stuttgart, 1931). Cohen, *Méd. Imp.* II, p. 87 suggested that these bronzes, of which he had never seen an example, might be contorniates, but they are not listed in Sabatier's *Médailles Contorniates* (Paris, 1860). Mr. Edward T. Newell tells me that the inscription recorded for them is improbable for contorniates. Although I have had the valuable help of Mr. Sydney P. Noe of the American Numismatic Society, I have found no trustworthy evidence for the genuineness of these coins. In any case, according to Mediobarbus' report of the inscription, they do not correspond in date to the *naumachia* of 109.

<sup>14</sup> Tac. *Ann.* XII, 56-7; Suet. *Claud.* 21.

<sup>15</sup> *Op. cit.*, pp. 212 ff., no. 438. The inscription on the obverse is IMP. CAES. NERVAE TRAIANO AUG. GERM. DAC. P. M. TR. P. COS. VI. P. P. The reverse shows the hexagonal harbor with the inscription PORTUM TRAIANI—S. C. Strack dates the coin in 113, the year of the sixth consulship. Cohen, *op. cit.* II, p. 49, nos. 306-7 and Mattingly and Sydenham, *Roman Imperial Coinage*, II, p. 278 (cf. p. 288) cite a second coin with an inscription which differs only in having COS. V instead of COS. VI. Strack has found no example of it and, since the coins are much worn and the inscription is of a type which usually belongs to the sixth consulship, he thinks that the reading COS. V is a mistake. The date of the completion of the port, attested

The contribution promised by the colony of Ostia, to which the settlement at Portus belonged, may not have been needed for the expenses of the games which the emperor himself probably defrayed. But just as American chambers of commerce guarantee contributions for conventions to be held in their cities, the city of Ostia may have promised a sum of money for the entertainment of the visitors who would have had to come from Rome and the surrounding towns for a stay of some days. Gamala's public-spirited contribution to the fund for the *bellum navale* caused the *decuriones* of Ostia to vote him a bronze statue at Ostia beside the *tribunal*, which probably belonged to the chief officer of the treasury, and a gilded statue, the location of which is not specified. In no. 375 from Portus, inscribed after Gamala's death, we may have the base of the second statue. In that case this statue was set up near the scene where the *bellum navale* probably took place.

The date of the inscription is of some importance because it is a significant document for the topography of Ostia. It records the construction of a *tribunal marmoreum* in the Forum and of the pavement with *silex*, *ab arcu ad arcum* of a street (as yet unidentified) adjoining the Forum. It also gives evidence for the establishment of *pondera ad macellum*. Moreover, besides the restoration of the temple of Vulcan, it mentions the construction (the word *constituere* is used) of four temples: those of Venus, Fortuna, Ceres, Spes.

As a result of a suggestion made by Van Buren<sup>16</sup> these four temples are usually identified with the four small temples *in antis* on one podium which front on a sacred area on the *decumanus* of Ostia. One of the temples has in it a marble altar inscribed *Veneri sacrum* (*C.I.L.* XIV, 4127) which, if it is *in situ*, would identify the temple as a shrine of Venus. It was

only by these bronzes, is usually placed in the period 103-112 when Trajan was styled *cos. V*. If Strack is right in dating the bronzes in 113, the port must have been dedicated between May 12 of 113 and the end of that year, for it is not mentioned in the *Fasti Annales* which we have for the period March 30, 108 A. D.-May 12, 113 A. D. (with an additional fragment of the year 116). On the ruins of Portus see the sumptuous volume of Lugli and Filibeck, *Il Porto di Roma Imperiale e l'Agro Portuense* (Rome, 1935).

<sup>16</sup> *A. J. A.* XI (1907), p. 55.

suggested by Carcopino that the house behind the temple in which the altar of Venus was found (usually known as the Casa di Apuleio) was at one time the property of Gamala, and after he made the suggestion an inscription with the name of Lucilius Gamala on it was found behind the temples.<sup>17</sup> The four temples were originally constructed in Republican times, perhaps as early as the third century, and were rebuilt on the tufa base on which they now stand at a period which Paribeni<sup>18</sup> would assign to the time of Sulla. There was a complete reconstruction of the shrines in the Empire. The reticulate walls were rebuilt, columns of brick covered with stucco replaced the earlier columns of tufa, and thresholds of travertine were put in.<sup>19</sup> Neither brick stamps nor any other sure indications of date have been found, but Paribeni in his careful publication of the temples came to the conclusion that the reconstruction took place in the second century after Christ. The rebuilding was sufficiently complete to justify the use of the word *constituere*. The actual remains are thus not inconsistent with the date suggested for the inscription.

The Gamala of no. 376, who continued his predecessor's

<sup>17</sup> *C. I. L.* XIV, Suppl. 4657. See L. R. Taylor, *The Cults of Ostia* (1912), p. 34; Paribeni, *Mon. Ant.* XXIII, 2 (1924-6), cols. 483-4. The mosaics of this house will be discussed by Dr. Marion Blake in Vol. XIII of the *Memoirs of the American Academy in Rome*.

<sup>18</sup> "I Quattro tempietti di Ostia," *Mon. Ant.* XXIII, pp. 441-483. The altar of Venus was found in Temple a (the one at the eastern end of the podium) in Paribeni's plan.

<sup>19</sup> To the restoration in the second century Paribeni would also assign the construction of mosaic pavements in the *cellae*. But the mosaic which is preserved in Temple d, the one at the western end of the podium, is certainly earlier. It has an inscription (*C. I. L.* XIV, 4134; cf. *E. E.* IX, 470 and Wickert's notes in *C. I. L.* XIV, Suppl. 4710), the beginning of which Dessau restored as follows: [*C. C*]artilius *C. f.* [*Poplicola duovir*] *V* [*e*]ns. *iter*. This restoration is not sure, for an examination of the mosaic shows that there was space for four letters before *ens. iter.* at the beginning of the second line. But the upper left corner of the mosaic is completely destroyed, and it is possible that the letters did not go out to the margin as did the letters of the lower lines. It is tempting to identify this Cartilius with *C. Cartilius C. f. Poplicol. duo vir VII cens. III* of *C. I. L.* XIV, 4710. That inscription is assigned by Carcopino, *op. cit.*, p. 174, to the early Empire, but I should be inclined to date it in the late Republic.

activity in building and restoring public monuments, was probably a descendant of the Gamala of no. 375. We have seen that his inscription is certainly later than the year 161. It can be more exactly dated from the fact recorded in his *cursus* that he served as *praefectus L. Caesar(is) Aug(usti) f(ilii)*. Carcopino has shown that this Lucius Caesar should probably be identified with Commodus, son of Marcus Aurelius, and that the form of his name and of the emperor's indicates that the document was inscribed between October 12, 166 when Commodus was given the name Caesar and March 17, 180 when Marcus Aurelius died.<sup>20</sup> The inscription would thus seem to be about fifty years later than the period to which we have assigned no. 375. Perhaps the Gamala of no. 376 was a grandson of the man of the same name recorded in no. 375. Besides the reconstruction of the baths built by Divus Pius<sup>21</sup> and of the porticus connected with them, this Gamala restored docks, followed his predecessor in providing *pondera ad macellum*, and in addition the *mensurae ad forum vinarium*. He built the *cella* of Pater Tiberinus, reconstructed the important temple of Castor and Pollux (both of which are as yet unidentified), and reconstructed (the word is *restituere*) the temple of Venus, presumably the same shrine that the earlier Gamala had built or rather rebuilt so completely that he felt justified in using the word *constituere* of his operations. As a matter of fact the *cella* walls of the temple of Venus, the shrine which is closest to the house which Gamala may have owned, show signs of a later restoration. The courses of the walls preserved have only on the east side the construction of *opus reticulatum* which is employed for the *cella* walls of the other three temples. The rear wall and that of the other side are of brick with *opus reticulatum* above it—a type of construction which may well belong to the end of the second century.

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<sup>20</sup> *Op. cit.*, pp. 193 ff.

<sup>21</sup> On the identification and the restoration of these baths see Calza, *Guida di Ostia*<sup>2</sup>, p. 97; Wickert, *C. I. L.* XIV, Suppl. Fasc. 2, 840-841.

## REVIEWS.

Publi Vergili Maronis Liber Quartus, edited by ARTHUR STANLEY PEASE. Cambridge, Massachusetts. Harvard University Press. 1935. Pp. ix + 568.

Upon Vergil's artistic treatment of the tragedy of Dido and Aeneas Professor Pease lavishes the same erudition that he displayed in his elaborate commentary on the pragmatic essay of Cicero, *De Divinatione*. If the poet's art rests less comfortably under the weight of the editor's learning, other scholars will welcome the rich store of factual information gathered through wide reading and intelligent sifting of ancient and modern criticism. Nobody, however obscure, who has contributed to the understanding of the fourth *Aeneid* since Vergil's time can escape mention in the 79 pages and 617 footnotes of Pease's Introduction, or the 450 pages, in double columns, of his Commentary, above which the text of Vergil occasionally emerges to remind us that we are supposed to be understanding Vergil and not reading Pease.

The edition is "primarily interpretative rather than textual" and the text is not the issue of new collations of the MSS. Nevertheless, the description of the MSS (pp. 71-79), the selected critical apparatus, the testimonia, bear witness to the editor's meticulous care. He has frequently corrected wrong references in his predecessors, and the testimonia wisely include the Vergilian centos. It should be added that the literary parallels in the commentary, sown with the sack and revealing the editor's wide reading in the literature of the Middle Ages and the early Renaissance, not only serve as further testimony to the authenticity of the text but often furnish raw material of great value to the student of Vergilian influence.

The introduction consists of brief, pungent paragraphs, richly annotated, which summarize important features of the poem: the theme of the entire poem, the purpose of the fourth book, its dramatic character and romantic elements, the sources (literary, legendary, and religious), the possibility that contemporary history affected Vergil's conception of Dido and of the Carthaginian setting, the poet's originality, the structure and the characters of the book, the scene, the method of composition, the later influence of the story of Dido upon literature and upon art, the manuscripts. The style of these paragraphs is concise, at times almost telegraphic; wise restraint and conservative judgment mark the handling of evidence throughout; if it lacks the finish of a coherent literary essay, this introduction contains much discreet handling of controversial points in little space. So, for example, the criticism of the data regarding the priority of

Naevius (pp. 18-21), with its agnostic conclusion, is a model of condensed argument.

It is regrettable that the fourth book is isolated, in Professor Pease's edition, from the earlier chapters of the story of Dido. Norden's concentration on the sixth book is justified, but the separation of the last three acts of Dido's tragedy from the exposition and rising action of the first three books of the *Aeneid*, convenient as it may be from an editorial standpoint, is fatal to any critical appreciation of Vergil's accomplishment. At least the first and the fourth books should not be separated. One misses any realization of Vergil's contribution to the artistic remodeling of the historical account of Dido, of the poetic art in weaving together the legend of Aeneas and the actual history of Dido, and of the general relation of Sychaeus, Iarbas, the magic ceremony in Vergil's poem to the corresponding features of prosaic history. If Heinze and others have already attempted such an appraisal, we expect the editor's reaction to the work of earlier critics. The historical sources are printed, in part, on pp. 14-17, but no conclusions are drawn from them; and occasionally even the commentary falls short of the whole truth in remarking on the sources. So, on vs. 494 (*tecto interiore*), not only should we note the divergence from Justin's epitome of Trogus in the location of the pyre but the closer correspondence to the detail in Timaeus, who describes it as ἐγγὺς τοῦ οἴκου, so near, in fact, that Dido threw herself upon it ἀπὸ τοῦ δώματος.

In any consideration of sources the main point is, as Mackail admirably states it (and Pease quotes with approval on p. 29), not what Vergil made his poetry out of, but what he made it into. Pease's excellent discussion of Cleopatra as a model for Vergil's Dido, marked by his usual restraint and accuracy of statement, but by its very length betraying the editor's favorable attitude toward the theory, is not counterbalanced by any realization that, if Cleopatra did serve as a model, it would simply be an interesting historical fact. Pease admits (p. 27) that Vergil in any case makes up a new imaginative creation. The factual analysis, on pp. 32-36, of Dido's qualities is quite complete but, except for a reference in a footnote (p. 34, n. 266) to Heinze, we are not informed how such a profusion of qualities can result in any unity and strength of characterization; surely, if passionate affection is her chief characteristic (p. 34), she is not sharply different from other love-stricken heroines of antiquity. And again, when Pease maintains (fantastically, in my opinion) that her pleasure-loving and emotional qualities, her tendency toward individual self-expression, are reflections of Vergil's interest in Epicureanism (pp. 36-37), not only would this, if true, be merely an interesting historical fact, but such qualities are common to many amorous women, and we still do not see how

Vergil has created such an impressive and dominant figure as Dido certainly is. In brief, Professor Pease faces an aesthetic problem but he is preoccupied with merely historical considerations.

Although the editor's exposition is usually lucid, his constant references to the relations between Dido and Aeneas are very baffling. On p. 39 he recognizes a moral flaw, Dido's disloyalty toward Sychaeus, and a moral flaw in Aeneas, his temporary deviation from the task imposed by fate (p. 45). On p. 45 he emphasizes Vergil's delicate treatment in the cave-scene and the poet's warnings against our crediting the unreliable rumors spread by Fama. He denies that *lectum iugalem quo perii* in vss. 496-97 is anything more than "suggestive" and reminds us that Dido is given to exaggeration. In his note on these verses (p. 411) the *lectus iugalis* becomes a couch "which Dido's eager imagination has converted into something more significant than it really was," and on *quo perii* he remarks that "*perii* may be used . . . of infatuation rather than anything more tangible." On p. 45 (and similarly elsewhere: cf. note on *infelix*, p. 145; where, may I ask, in Latin literature is *infelix*, recurrent in Vergil in its ordinary sense to indicate in advance a tragic issue, used to describe a barren woman?) he says "one cannot escape the fact that Dido knows she will bear no child to him." The nearest approach to an explicit conclusion is (p. 45) that Vergil "intended to leave in doubt the exact nature and extent of Aeneas's relations to Dido," and the evil-minded reader is dismissed with the trite French proverb, *honi soit*, etc. From Professor Pease's more-than-Vergilian reticence I can only gather that the editor supposes that Vergil by ambiguous language is leaving the relation quite equivocal. I should stoutly maintain that only illicit intimacy, concealed under such subterfuges as *coniugium* and *lectus iugalis*, meets the demands either of the Latin language or of the tragic drama. If anybody imagines that the diction in vss. 171-72 and 496-97 is ambiguous and that a Roman reader might think of honorable marriage or innocent petting-parties, he must be curiously insensitive to the connotation of the *sermo amatorius*. Vergil is using the diction of sentimental elegy, somewhat dignified, perhaps, but never equivocal.<sup>1</sup>

<sup>1</sup> Further remarks scattered through the commentary add to our mystification. Sometimes one cannot tell whether Pease is whitewashing Aeneas or attributing to Vergil a dignified discretion. P. 202: "I should explain . . . as a mortal marriage," but later in the same note "the alleged nuptials." P. 103 (*culpae*): "the word may be used, in a minimizing way, of an immoral act . . . or of immorality in general . . . , yet the meaning here is less severe." P. 155 (*sola*): Pease takes great pains to prove that "there is no evidence that Aeneas lodged in Dido's palace during his stay in Carthage." P. 210 (*coniugium*): discussing the legal significance of *coniugium* and *conubium*, he remarks "That Dido calls it *coniugium* seems to imply that Aeneas did

In reading the commentary any critic must feel humble in the presence of such broad and deep scholarship; and any adverse criticism is directed, not against the individual editor, but rather against traditional procedure. It is a singular fact that, although in recent years we have reached some satisfying conclusions, in theory and practice, regarding *Editionstechnik* so far as text and critical apparatus are concerned, we have as yet hardly faced the problem of what is quite legitimate in the writing of commentary on classical authors, particularly when the document in question is fundamentally a work of art, and not a didactic or factual treatise. Professor Pease says in his preface (p. vii): "... since, as Servius asserts, all Vergil is *scientia plenus*, it has seemed proper to assemble, for teachers and other interested scholars, something of the wealth of exegesis which is largely inaccessible to those remote from large libraries." But this profession of self-sacrificing devotion on the editor's part is only an interesting example of self-deception. What Pease has really done, in large part, is simply to indulge his personal interest in quite isolated historical facts or *Realien* and to collect information of great value to his fellow-scholars working in various fields of classical philology, without advancing our understanding, in such cases, of Vergil's poem one jot or tittle. There are, to be sure, admirable precedents for such editorial comment but it is desirable that such a tradition should be broken rather than perpetuated.

So, even if *picti* does refer to tattooing (pp. 193-95), we are hardly enlightened by learning about tattooing among the Britons as well as among the Thracians. *Duris* (pp. 315-17) is not sufficient warrant for informing us about all the various ways in which the ancients described the hard-hearted. All the passages

not, but either recognized no relation at all, or else that of a mere liaison (*amores*)." And in the same note, without any indication of disapproval, he quotes Hermann to the effect that Vergil "had tried to keep the ancestor of Augustus—who laid so much stress on the purity of marriage—from any violation of the marriage relation, making Dido herself lament . . . that she had no child by Aeneas." P. 211 (*culpam*): "... here the *culpa* involves unfaithfulness to the memory of Sychaeus; whether it here implies more than that may be open to question." P. 222 (*infecta*): here Pease convinces himself that the only specific *infecta* are contained in *luxu* and *turpi* . . . *cupidine captos*, and then continues "If these, then, alone are to be classed as slander . . . , the prevalent view of the relation between Aeneas and Dido needs revision." I may here remark that not only Heinze but Servius (on vs. 194) regards *regnorum immemores* as a *fictum*, and that *hiemem* may be an exaggeration, so that Pease's list of *infecta* is not convincingly complete, not to mention the fact that the poet hardly intended this account of Fama to be exposed to scholarly scrutiny. P. 295 (*saltem*): he again quotes Hermann, here with manifest approval, to the effect that "the ancestor of Augustus, that stout defender of the marriage tie, must not be represented as compromised in his relations with Dido," etc.

on Hyrcanian tigers (pp. 317-18) are of little value compared with the suggestive comment of the scholia Danielis in the sage observation "sane quidam absurde putant Caucasum et tigris a Didone memoratos quia nec Didoni perturbatae venire in mentem Caucasus potuit." Yet Pease, instead of understanding this criticism, thinks it refers to anachronism, overlooking *perturbatae*, which clearly indicates that some ancient critics were sensitive to the fact that pedantry is inconsistent with emotional stress. In the comments on the magic ceremony Pease's interest in religion and folklore runs riot. The mention of an owl (pp. 375-77) leads him to ransack ancient and modern literature. A sunset leads him far afield (pp. 389-91). The dragon (pp. 394-95), the identification of the golden apples (p. 396), *hippomanes* (pp. 426-29), bare feet in ritual (pp. 430-33), the all-seeing Sun (pp. 483-85), and a variety of similar topics retard the suicide of Dido without compensatory dramatic suspense. Egregious examples of this type of commentary appear on *ostro* (pp. 184-86) and *flaventis . . . comas* (pp. 471-73). In the former passage Dido's steed is described as *ostroque insignis et auro*. Manifestly we have simply a visual image to reconstruct, and for the understanding we need only an interpretation of *ostro*. Pease asserts, with evidence, that *ostrum* is the noun corresponding to the adjective *purpureus*; he follows with a paragraph on the *murex*; this, in turn, with a full list of the places where the dye was manufactured; this, again, with an account of purple as associated with the wealthy and as a symbol of royalty; and finally he discourses on the frequent combination of gold and purple. But the only relevant question is: what color is connoted by *ostro*? Without evidence regarding the color we cannot see what the poet intended us to see. If it turns out to be red instead of purple much of the commentary is superfluous. More amusing is the second example. In vs. 590 Dido cuts off her *flaventis comas*. Pease solemnly states (p. 471) at the beginning of his note: "A note on the blonde type is here in place," and for five columns he enlarges upon this quaint theme. In the midst of his accumulation of passages, lest he should be guilty of gentlemanly preferences, he asserts (p. 473): "Allusions to dark hair, which are not infrequent from Homer onward, I shall not here consider." Thus narrowly do we escape complete information.

It is apparent, I think, that Professor Pease, rather than Vergil, is *plenus scientia*. All such information finds an appropriate place in Pauly-Wissowa, in Bluemner's *Technologie*, in handbooks on anthropology, religion, folklore, and in germane periodical literature. But it should be regarded as an editorial impropriety to seize upon a word in an artistic literary document and make it the text of a learned disquisition unless the dis-

cussion throws light upon the denotation, connotation, use, or stylistic value of the word in question. So, for example, there is some propriety in the elaborate note on *more ferae* (pp. 449-51) in so far as it may clarify the connotation of that phrase in Vergil's text.

In the relevant commentary there is evidence, occasionally, that the editor's knowledge of *Realien* is not matched by a sensitiveness to niceties of expression and style. I can only comment briefly on a few examples. Although we may hardly expect the constant analysis of sentence structure that the author of *Die antike Kunstprosa* provided for the sixth *Aeneid*, Pease apparently has little intelligent interest in this feature of style; Vergil's parentheses (cf. Pease's Index, s. v.), for instance, are numerous enough to lead to some generalizations on the poet's style. The shift of tenses in narrative and description is worthy of more attention; often there are no comments at all (e. g. vss. 509 ff., and even in 685-687 the notes on *fovebat* and *siccabat* show no appreciation of the descriptive imperfects used of background detail); often the comment is too brief and unconvincing (e. g. the perfects of "rapid action," as Pease regards them, in *petiere*, p. 203, or *deseruere*, p. 467, where one might observe that *deserunt* is impossible in dactylic verse). P. 228 (*accensus amaro*): in view of Catullus's extraordinary mixture (64, 97-98) is it not more likely that *accensus*, rather than *amaro*, has lost its full force? A feeling for balance would remove some of the editor's uncertainties in vss. 242-44 (pp. 248-52) and might throw some light on the crucial difficulty of *morte resignat*. In this same passage Pease is indifferent to the stylistic significance of the detail lavished upon Mercury and is content with a bare reference to Georgii (in the note on vs. 246, *latera*); here, again, what Mackail calls an infelicitous parenthesis deserves the elaborate consideration that Pease gives only to *Realien*, and almost never to elements of style. P. 273 (*fortem*): "the presence of which with one of the proper names helps to offset the fact that the other two remain without characterization." But is not the proper comment that the Roman reader supplied *fortem* with the other two proper names? P. 287 (*Troia . . . peteretur*): before we accept the punctuation and interpretation of this sentence, we should like to see the two or three other sentences in Vergil (not to mention other authors) introduced by *quid si* or *quid si non*; and we expect a comparison of the thought and structure of vss. 340-44, in which Aeneas responds to Dido's plaint. P. 288 (*per ego has*): "These illogical but natural collocations express strong emotion which causes the speaker to utter his words regardless of logical order or of grammatical rules." But can an inherited tendency to put monosyllabic and dissyllabic personal pronouns in the unemphatic position in a

sentence be regarded as illogical, emotional, and rhetorical? Does Pease really believe that grammar rules and logic are violated by the principle of enclisis? Pp. 358-61: a crucial difficulty is adequately discussed, but if Vergil wrote *dederit*, he should be roundly condemned for the parenthetical *miserere sororis*; *dederis* redeems the poet even if it does not restore his text. Pp. 367-68: in this dispute regarding whose tears are referred to, why will not Pease and other critics settle the question on the basis of style? In the sequence *heros tunditur*, . . . *persentit* . . . *curas*, *mens immota manet*, *lacrimae volvuntur inanes*, how can the tears be anybody's but Aeneas's if one has any sympathetic knowledge of the Latin language? P. 387: it seems to me that Mackail shows his feeling for poetic values in his understanding of *spem fronte serenat*; critics who insist on hypallage are robbing poetry of all its value and reducing it to prose. P. 401: the construction of *aliis*, in my opinion, should be determined by a consideration of style; *aliis* is dative (and not with *mentibus* but *hominibus*), and another *aliis* is to be supplied with *solvere*; the magician's function is to relieve some, involve others. Similarly the scholia Danielis supply *cura* with *solvere* from *curas* with *immittere*; the balance corresponds to that in vs. 479. P. 439 (*lenibant*): it seems strange to say that "this form is too rare to have been coined by an interpolator" when manifestly this form of the imperfect of *lenire* is the only one available for Vergil or any interpolator if he is writing dactylic verse. P. 442: are we to understand that Pease denies that *quid ago* and *quid agam* are often substantially the same in meaning? I doubt whether any reader of Latin comedy could agree with him. P. 464 (*sancte deorum*): one would expect the non-existence of a vocative of *deus* to play some part in the discussion; cf. Loefstedt, *Syntactica*, I, 70 ff. P. 498 (*cinis ater*): the history of the noun *bustum* seems pertinent to the discussion. On the same page, one may conceivably supply another *mihi* with *siste*; but, if one has a feeling for Latin idiom, the *mihi* interlocked between *cara* and *nutrix* is inseparable from that unit of thought. P. 521 (*vocasses*): why omit the possibility of "you ought to have" etc.? P. 525 (*extremus*): one should quote the Greek original of Shelley in Bion's *Epitaphios* 47-49 rather than Shelley's translation; and Wilamowitz's note on Bion might interest Professor Pease, with its insistence on Stoic influence.

In spite of such reservations we should wish the final emphasis to rest on the fact that this edition of the fourth *Aeneid* and Pease's previous edition of Cicero's *De Divinatione* are almost isolated examples of American achievement that may be favorably compared with the *wissenschaftliche Kommentare* of distinguished European scholars.

HENRY W. PRESCOTT.

A Documentary History of Primitivism and Related Ideas. General Editors: ARTHUR O. LOVEJOY, GILBERT CHINARD, GEORGE BOAS, RONALD S. CRANE. Vol. I. Primitivism and Related Ideas in Antiquity, by ARTHUR O. LOVEJOY and GEORGE BOAS, with supplementary essays by W. F. ALBRIGHT and P.-E. DUMONT. Baltimore. The Johns Hopkins Press. 1935. Pp. xv + 482.

"As the generations pass, does the condition of mankind grow better, or grow worse, or remain, except in external and relatively unimportant ways, the same; has the advance of civilization been a gain or a loss for the species responsible for it; is it a manifestation of man's superiority among the creatures, a legitimate ground for racial pride, or is it an evidence of his folly or depravity; are those peoples the most fortunate among whom it never began, or was speedily halted? It is the record of the opinions which men, chiefly in the Occident, have held upon such questions, at least down to a century and a half ago, that these volumes are—if the project can be carried out—designed to present: the record, especially, of civilized man's misgivings about his performances, about his prospects—and about himself." (p. ix)

These sentences, which appear in the preface of the present volume, may fairly be taken as a description of the vast undertaking upon which a group of Johns Hopkins scholars are known to have been engaged for some time. Since the questions here presented, which determine the kind of answers which are to be recorded in this history of ideas, are perennial not only among professional philosophers but among all thoughtful men, this volume and its successors are assured of wide and interested attention. The world may well be grateful that so much labor and learning are being expended on this particular task in the organization of human knowledge.

Though Primitivism has been adopted as the general caption for the series, it will be seen from the scope of the questions which have been quoted that the range of ideas which are examined is wider than the word would at first seem to imply. Anti-primitivism is equally significant and receives equal attention, as well as the kind of ideas which are implicit in such familiar phrases as "the idea of progress," "the noble savage," "the Golden Age," "technological advance," and "the simple life." This whole complex of ideas is minutely analyzed by Professor Lovejoy in the first chapter of the present volume, entitled *Prolegomena to the History of Primitivism*, which serves as an introduction to the whole series. Chronological and cultural primi-

tivism and antiprimitivism are distinguished; and these in turn are divided into subordinate types which have actually been found or which might theoretically be supposed to exist. The technical terms which are adopted for these various types provide a special vocabulary for the ensuing studies and facilitate the classification and discussion of the texts.

Far the greater part of the book consists of a collection of Greek and Latin texts touching primitivism and related ideas, together with an exposition of their significance and their implications. That the search for texts has been conducted over a wide field and may be regarded as practically exhaustive is proved by the fact that the citations are drawn not only from the well-known works of antiquity but also from remote and unfamiliar authors, and from the collections of fragments of authors whose works are lost. In the case of Plato alone references to the relevant passages are given without full quotation because his works are assumed to be accessible to all. The texts have been submitted to an impartial and unprejudiced examination by the authors, who have wrung from them every drop of significance and presented their conclusions judiciously, without praise or ridicule, in a style, dry, accurate, and precise.

English translations are supplied for all the texts that are quoted, and they have been prepared in almost all cases by the authors themselves. The present writer does not profess to have examined them all, but trial trenches have been run in various parts of the book, which have revealed the quality of the translation sufficiently to justify some critical observations. The two authors appear to have two standards of translation. Professor Lovejoy has chosen to write English which is free of the blemishes of Greek idiom, but therewith he has given the thought of the original with striking accuracy and correctness. Professor Boas, on the other hand, has clung more closely to the method of the "construe," and though he has succeeded in disentangling successfully many difficult passages, his English has not the natural flow of original composition and does not always avoid obscurity. Not a few mistakes in interpretation, besides, somewhat weaken one's confidence in the reliability of his translations, though it must be admitted that nothing has been found which seriously vitiates the translation as a document for the study of primitivism.

The following more questionable renderings have been noted.

P. 37: "and many other tales are told about her" allows the reader to think that "her" is Dike instead of the constellation Virgo. The reader of the *Catasterismi* would not go astray. The same misleading rendering appears in the following translation of Hyginus. P. 39: *παρὸν κολυμβάν* is not "so that I shall dive," but "when it is possible for me to dive." P. 47: *semina tum*

*primum longis Cerealia sulcis obruta sunt* is not "then grain was first cut down with long sickles," but "the seeds of Ceres were then first covered over in long furrows." P. 47: *quaeque diu steterant in montibus altis, fluctibus ignotis insultavere carinae* is not "trees still stayed in the high mountains, the wood of keels grew up ignorant of the waves," but "trees which had long stood in the high mountains now in the form of ships bounded over the waves which they had not known before." P. 48: *dextra laevaue deorum atria nobilium valvis celebrantur apertis* is not "on right and left with open doors are the dwellings occupied by the noble gods," but "on the right and left stand the dwellings of the gods through whose open doors throngs pass in and out." P. 48: *centum quisque parabat inicere Anguipedum captivo braccia caelo* is not "each of the hundred serpent-footed monsters prepared to capture heaven with their arms" ("arms," too, is ambiguous), but "each prepared to lay his hundred hands on heaven." P. 48: *qua totum Nereus circumsonat orbem* is not "wherever Nereus resounds throughout the whole globe" ("globe" is particularly unfortunate), but "all over the earth which is encircled by the sounding sea." P. 48: *immedicabile vulnus ense recidendum est* is not "an incurable wound must be reopened with the sword," but "must be cut out," as with a surgeon's knife. P. 49: "trembling all" for *confremuere* shows a confusion with *contremuere*. P. 64: *πόθεν ἂν μοι γένοιτο* is not "whence comes this?" but "where can I find the means of life?" P. 291: *Χειμών πολὺς* is not "long winter," but "heavy storms." P. 299: *Φανερώς ἐντυγχάνειν πολλοὺς ὄψεσι δαιμόνων καὶ φωναῖς* is not "many have met him (τὸ θεῖον two lines earlier cannot be taken as an antecedent to justify "him") openly before their eyes and ears through *daimones*," but "many have encountered deities openly, seeing them with their eyes and hearing their voices." P. 307: *τὸν οἷσιν περιέφερε κατὰ πᾶσαν τὴν γῆν* is not "has gone round the whole earth on his arrow," but "has carried his arrow everywhere throughout the earth." P. 308: *ἐκ τῶν Ὑπερβορέων Ἀβαριν εἰς τὴν Ἑλλάδα καταστήσαντα τὸ παλαιὸν ἀνασῶσαι τὴν πρὸς Δηλίους εὐνοίαν τε καὶ συγγένειαν* is not "confirmed the goodwill of the Delians and their kinship," but "renewed the friendly relations between them and their kinsmen, the Delians." (*εὐνοίαν τε καὶ συγγένειαν* is an instance of hendiadys.) P. 324: *τὸν Παντικάπην διαβάντι Λιμναίων ἔθος ἑτέρα τε πλείον' οὐ διωνομασμένα, Νομαδικά δ' ἐπικαλούμεν', εὖσεβῇ πάνν* is not "one meets the tribe of the Limnaei, and others not more well-known. And those called Nomads are very pious," but "one meets a tribe of marsh-dwellers, and tribes of another kind in greater numbers which are not distinguished from one another by special names but known by the general appellation of Nomadic."

Furthermore, to say (on p. 32) that the author of the Alcmaeonid (it should be Alcmaeonis) wrote an "account of 'the most happy life in the time of Cronus'" is to infer more than the brief statement of Philodemus allows.

A number of errors in references and in printing have been noted which might make trouble for the reader, e. g. *Poetae medici* for *melici* (p. 30), *ὄταν καλῇ τι* for *τις* (p. 40), *saeculi* for *saecula* (p. 43), *ἐνὶ* for *ἐπὶ* (p. 94), *legem* for *legum* (p. 97), Harpocrates for Harpocraton (p. 344).

What principle of arrangement was to be adopted in the presentation of these texts and of the conclusions to be drawn from them? That the answer to this question was difficult, the authors acknowledge in the preface. It may be that their solution of the problem was the best one, but to the present writer at any rate this is somewhat doubtful. They say (p. xii): "An analysis and anatomizing of texts, and a separating-out of the passages pertinent to the several ideas of which the history is under investigation, are . . . the first essentials in such a study. The passages illustrative of a given unit of this kind, and of its vicissitudes, need then to be brought together as a separate division of the story. These methodological preconceptions have chiefly determined the arrangement of the passages herein cited. They precluded a merely chronological sequence of long passages, where these ranged over a number of ideas which it appeared important to discriminate and present separately. The reader will therefore sometimes find portions of a given text in one chapter of the volume, other portions in another; and he will likewise find different writings of the same period cited, or referred to, in widely separated parts of the book." No exception can be taken to the principle here enunciated so far as it relates to the presentation of ideas. But when the same principle is applied in the arrangement of the texts, an organization results which seems to be disadvantageous in several ways. In the first place, the real purpose in the full citation of texts is to present to the reader the exact evidence objectively so that it can speak for itself. This is, indeed, the function of a documentary history. But when all the documentary evidence, in large pieces, is injected into essays involving subjective interpretation, a confusion of purpose results which is disturbing to the reader. The writer of the essay does not allow himself a free hand in developing the conclusions which he draws from the evidence, and the reader is embarrassed by the constant change of gear in passing from the discourse of the modern author to the Greek or Latin text, from the text to the translation, and back again to the modern author. The discontinuity makes hard reading, and it is difficult to keep clearly in mind the ideas which the documentary evidence is intended to illustrate. Again, though the

authors have made every effort to keep the chronological relations clear, it must be admitted that the objective value of the documentary evidence is impaired by the arrangement of texts of all epochs on the principle of "unit-ideas." Unquestionably these considerations were in the minds of the authors, and the plan which they adopted, though they may have seen its imperfections, seemed to them the best under the circumstances. They have, however, diverged from the plan in certain parts—wisely, it seems, though they themselves fear it may have been a mistake. They have assigned special chapters to four important writers, Plato, Aristotle, Lucretius, and Cicero, and to two schools of philosophy, the Cynics and the Stoics. But even here the continuity of the discourse is broken by the need of citing passages in full.

To the present writer the book would be at once more readable and more useful if the documentary evidence and the essays on the "unit-ideas" had been kept apart. The Greek and Latin texts with their translations could have been arranged on a strict principle of chronology, and could have stood as an indefeasibly objective presentation of primitivism in antiquity. In it the chronological ebb and flow of this conception could have been examined by the interested reader—a thing which is impossible with the present arrangement. At the same time, the essays on the "unit-ideas" could have been written uncramped by the need of introducing into them all the relevant texts, together with the essential remarks concerning manuscript readings and doubtful interpretations. References to the corpus of documentary evidence would have been sufficient, or, if more were required, a list of the pertinent texts, placed at the head of the essay, would have served the purpose.

Though it may appear presumptuous thus irresponsibly and without full knowledge of all the difficulties to hazard a suggestion concerning the problem of arrangement, it may not be unacceptable to the authors, in view of the future, to learn something of the impression which has been made upon one reader at least.

No notice of this book would be complete without mention of the brief essays of W. F. Albright on "Primitivism in Ancient Western Asia" and P.-E. Dumont on "Primitivism in Indian Literature," and of Professor Lovejoy's important study of the concept of Nature.

"The history of primitivism," says Professor Lovejoy (p. 11), "is in great part a phase of a larger historic tendency which is one of the strangest, most potent and most persistent factors in Western thought—the use of the term 'nature' to express the standard of human values, the identification of the good with that which is 'natural' or 'according to nature.'" The "genesis of the conception of 'nature' as norm" is made the subject of

special study by Professor Lovejoy in one chapter in the book, and the exposition of it, which is happily unbroken by the citation of long texts, is particularly shrewd and illuminating. Furthermore Professor Lovejoy has provided a very remarkable appendix on "Some Meanings of 'Nature,'" in which, though the safe and modest word 'some' is used in the title, is found a list of no less than sixty-six meanings; thirty-nine "senses of physis and 'nature' in literary and philosophical usage from which ethical and other normative uses are derived," and twenty-seven "normative uses in ethics, politics, and religion." This whole contribution is valuable not only as a part of the history of the ideas which are under consideration but also as a most helpful commentary on the meaning of φύσις and νόμος in Greek literature of the Age of Enlightenment.

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Livy IX, Books XXXI-XXXIV. With an English Translation by EVAN T. SAGE, PH. D. (The Loeb Classical Library). Cambridge, Harvard University Press; London, William Heinemann, Ltd., 1935. 594 pp.

This is a well groomed volume, meeting requirements that should have been set by the editors for all contributors at the very outset. The translator is solicitous about the text, which anticipates recensions now in progress, and has chosen his readings with excellent judgment and caution. He is perfectly familiar with the tools of annotation and furnishes clear and succinct notes exactly where needed. Roman praenomina are consistently expanded, as they ought to be, and the proof-reading has been unusually well done. Names of places mentioned are readily located on three clear and simple maps. The version is done in a very perspicuous style, admirably punctuated. If a suggestion for future volumes may be permitted, especially for the sake of students, it would be this, that Latin particles be invariably translated; omission has been noted of *quidem* (p. 44), of *autem* (p. 54), *vero* (p. 366), and of others. The word "rather" probably falls short of the force of *immo* (p. 418 middle, and elsewhere), which usually means "far from it," "nothing of the kind," or something similar. Scornful rhetorical questions with *an* (pp. 84 and 116) deserve more emphasis: "Is it conceivable," "Can it be that." Only a god, of course, could make an errorless version; the rendering of the sentence *quamquam . . . decuit* (p. 416) might well be questioned, and in

the first line of p. 425 "not" should be deleted. From these slips, however, no generalization is to be made. The whole translation evidences the utmost care and diligence.

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ERWIN R. GOODENOUGH. *By Light, Light. The Mystic Gospel of Hellenistic Judaism.* New Haven. Yale University Press. Pp. xv + 436. \$5.00.

The marked increase of scholarly interest in Philo Judaeus in recent years is attested by the publication, in the last decade, of more than forty books and monographs devoted solely or chiefly to his writings.<sup>1</sup> Among these have been a number of works dealing with Philo's relation to Hellenistic mystery cults and theologies. Professor Goodenough, who has already produced one substantial volume and several good articles on Philo, now presents us with the most elaborate study to date of this aspect of the Hellenistic Jewish philosopher. He attempts to reconstruct in far more systematic and detailed fashion than did Pascher in his book *Der Königsweg* the central mystery of Philo's teaching and to relate it, on the one hand, to the Hellenistic theologies (e. g. Hermetic and Orphic-Pythagorean) and, on the other, to the normative Judaism (G. F. Moore's now classic term) of Palestine and the Diaspora.

The book has many virtues: first, the author has rare sympathy with and understanding of Philo's personality and religious genius (lacking which, Reitzenstein and Pascher succeeded only in mechanical analyses of sources); second, he has ingeniously discovered and clearly demonstrated the amazing consistency of Philo's mystic teaching throughout the involved allegories of his three kinds of exposition, the Sacred Allegories, the Exposition of the Law, and the *Quaestiones in Genesim et Exodum*; third, he has assembled the relevant passages in their dramatically progressive order and has provided them with numerous helpful philological comments and citations from pagan and Christian sources, incidentally shifting emphasis in a suggestive manner from Stoic or Aristotelian to Neo-Pythagorean tradition (particularly in the Appendix on "Law in the Subjective Realm," which seems a kind of after-thought); and finally, he has written in a lively, clear, persuasive, and often distinguished manner. On the other hand, there is much to criticise, as we shall see in a moment.

<sup>1</sup> Cf. the reviewer's article "Recent Literature on Philo" in the *George A. Kohut Memorial Volume*, 1935.

The thesis of the book is that Philo represents the patriarchs and Moses as priests and hierophants of a Mystery through which the initiated may achieve salvation in the mystic sense, and that for Philo (and some of the Hellenistic Jews whose works have survived, such as Aristobulus, the author of the Wisdom of Solomon, etc.) "God was no longer the God of the Old Testament: He was the Absolute connected with phenomena by His Light-Stream, the Logos or Sophia. The hope and aim of man was . . . to rise to incorruption, immortality, life by climbing the mystic ladder, traversing the Royal Road, of the Light-Stream." It is true that Philo and some of his Alexandrian coreligionists were convinced that the Pentateuch contained an esoteric truth higher and deeper than that of any pagan mystery; and it is probably true that Philo as a gifted religious thinker and mystic was not completely satisfied with the traditional exegesis of his Jewish contemporaries whether in the Diaspora or in Palestine. But that he went so far beyond normative Judaism as Goodenough throughout implies or that there actually was in Alexandria an organized Jewish mystery-cult with initiation, priests, symbolical rites, etc. as he suggests (pp. 259, 331, 353; cf. Cerfaux in *Le Muséon*, XXXVII [1924], pp. 29-88) is extremely doubtful. There is no space in this brief review for extended refutation. But it may not be unfair to remark that if Goodenough had first-hand familiarity with rabbinic texts he would be much slower to detect departures in Philo from normative Judaism (which had its own developed mysticism in doctrines of hypostatized Torah, Law as Light, Metatron, divine attributes of royalty, etc.) or to suppose that Philo found traditional exegesis so inadequate to his mystical needs. In one or two instances Goodenough has seriously misinterpreted Philo's text, probably because of his intentness on showing that Philo's mysticism "transcends the written Torah." One example occurs on p. 160 where he translates a (Latin) passage from *Quaest. in Gen.*, iv, 140 as follows: "He [the initiate] is taught that the monuments of Sophia and of Vision are *not the holy books of the Lord* (italics his) but the divine command and the divine Logos, etc." The Armenian text and Aucher's Latin rendering mean "He is taught that the holy books of the Lord are not monuments of knowledge (the Armenian word = *ἐπιστήμη*, as Aucher correctly renders by *scientia*) and of vision but are the divine command and the divine Logos, etc."—quite a different thing. There are many statements to which the reviewer might take exception here if this notice had not already exceeded its prescribed length. But he must conclude with the judgment that Goodenough's book is well worth reading and will long remain as a valuable collection of material bearing on this fascinating (and

difficult) theme. It remains to note that it contains several useful indices.

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GLENN R. MORROW. *Studies in the Platonic Epistles with a Translation and Notes.* Illinois Studies in Language and Literature, vol. XVIII, nos. 3-4. The University Press of Illinois, 1935. \$3.00.

Professor Morrow's studies are better than his translation. His inquiry into the historical sources and their relation to the *Epistles* is particularly valuable. But it is arbitrary to decide, against the sources, that Dionysius had nothing to do with Plato's being held for ransom at Aegina and that the date was 387 B. C. Anniceris was on his way to the Olympic games, no doubt those of 388. Morrow should have noticed that his statement in the note on p. 153, giving Hipparinus' age as five years in 367, disagrees with the statement on p. 83 that he is unlikely to have been as young as twenty in 354. There is at least as great an improbability in the assumption that Arete had a twenty-year-old son of her second marriage when she herself was about thirty-five. In the note on p. 83 it is implied that I am or was unaware that an ἀντίπαις might be anywhere from fourteen to eighteen years old. Actually I argued that Dion's son was not an ἀντίπαις in 354 because Plutarch referred to him as τὸ παῖδιον and σκεδὸν ἀντίπαις, expressions which taken together imply that he was just passing out of boyhood, an event that would occur when he became fourteen. Nor do I think that we need exclude Dion's posthumous son from consideration as the proposed king because of the mention (VIII, 357c) of an agreement between him and Hipparinus, since, no matter what the age of Dion's son, a previous agreement is out of the question. The whole scheme is obviously future and Richards, who had no axe to grind, proposed to insert ἄν for that reason. The present tense of τυγχάνει above belongs to a timeless general statement and has no bearing on the question. These are small points amid the general excellence of Morrow's historical and philosophical discussion.

Much has been done to interpret the Epistles in the last ten years. This is the fourth English translation within that time, and it utilizes the work of Novotný, Harward, Eggermann and others. There is no attempt to take into account the recent work of J. Pavlu or G. Hell, though the latter's work is cited among

the references. It would have been better to follow Souilhé's text rather than Burnet's, who could not profit by the rediscovery of vat. gr. 1. The *Epistles* are considered genuine except for I, II, IX, XI, XII. The translation is good except in spots, though I should prefer Bury or Harward. Morrow deserves credit for suggesting the correct translation of X, 358c, where the Greek should be expanded τῶν εἰς φιλοσοφίαν τεινόντων ἡθῶν, "the philosophical virtues."

There are many new interpretations that would be hard to justify, such as "if it appeared to you to be as easily discovered as that" for εἰ φαίνοίτο σοι οὕτως ἔχειν (313b 2), "devoted to understanding it" for περὶ τοῦτο (313b 4), "dismiss my doubts" for μὴ μαλθακίζεσθαι (317c 5), "remembered" for ἐμνήσθη (347d 1). I still hold to my own translation of 335d 1, διὰ τῆς ἀρχῆς: "throughout his realm" not his "reign"; and Morrow agrees with me. The size of Dionysius' empire was an important consideration (327e 5). At 354e 2 Morrow agrees with Novotný and others "any master, even a lawful and just one" instead of following rhythm and Platonic thought by combining νόμῳ δεσπότῃ. Note δουλεύσαι νόμοις (c 6) and δεσποζόντων νόμων (355e 2) in the immediate context. At present rhythm must be determined subjectively, but it should nevertheless receive consideration. Bury alone has followed me in my correct translation of 353b 3, ὥς φασιν, τυράννους: "in the current phrase, tyrants." At 349c 6 I still think that it was Plato's old plot, not Dionysius', that afforded the latter a pretext for a quarrel, which he began, be it noted, by expelling Plato from the citadel, pretending to fear him and thus escaping from his importunities. At 335b 6 I should now propose to read οὐχ ὁρῶν ὥς συνέπεται τῇ τῶν ἀρπαγμάτων ἀνοσιουργία κακόν, ἥλικον αἰεὶ μετ' ἀδικήματος ἐκάστου ἦν ἀναγκαῖον τῷ ἀδικήσαντι συνεφέλκειν κτλ. The predetermined weight of guilt that each sinful act adds to the burden of *karma* is a usual feature in systems of transmigration.

The notes are not numerous and require no comment. I call attention here to Miss Richter's full account of Ἀμοργίνων (363a 4) in *A. J. A.*, XXXIII (1929), pp. 27-33. At 356a it should be noted that Hipparinus was freeing the city by constitutional reforms. Otherwise ἐκόν would be inappropriate. At 337c 1 εἶναι should be construed with ἱκανοί: "as for the number, it is enough that there be fifty such." The statement in *Epistle* II, 311b that the story of Prometheus was in the writer's opinion intended to illustrate the association of δύναμις μεγάλη and φρόνησις, obviously as an instance of τοὺς εἰς φιλίαν ἀλλήλοις ἰόντας, coincides remarkably with H. D. F. Kitto's independent interpretation of Aeschylus' Prometheus trilogy in *J. H. S.*, LIV (1934), p. 14 as a study of "the slow coalition of Power and Intelligence typified in the reconciliation of Prome-

theus and Zeus." Kitto and the second *Epistle* should both profit by this mutual support.

At 314c the fine, new Socrates who wrote Plato's works is Plato himself. Just so was Aspasia called a new Omphale in old comedy and the party of Pericles new Peisistratidae (see Plutarch, *Pericles*, 16, 26). One common element was enough to justify the figure of speech. The Socratic element in all of Plato's works is their protreptic purpose. They are written as sermons and not, like Dionysius' attempts, for purposes of ostentation or even exposition. The charge to burn the letter (314c) is not what we should expect of a forger. Compare Jane Welsh Carlyle's *Letters to her Family 1839-1863* (New York, 1924), p. 83, "Pray read all this unto yourself and burn the letter." Again Plato's use of a token (XIII, 363b) to distinguish serious letters of introduction is closely paralleled in a letter of Walter Scott, quoted in chapter 27 of Lockhart's *Life*, "You can sign such letters of introduction as relate to persons whom you do not delight to honor short, *T. Scott*; by which abridgement of your name I shall understand to limit my civilities."

The book is remarkably free from misprints. I note only the absence of an iota subscript (p. 149, 3) and the transposition of 'be no' (183, note 1).

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J. MAROUZEAU. *Traité de Stylistique appliquée au Latin*. (Collection d'études latines, Série scientifique, XII). Paris. Société d'Édition "Les Belles Lettres." 1935. 40 Francs.

The less a man says about what does not interest him, the less vapid his style is likely to be. "Sermo illiberalis" and mere verbiage may beset a modern Frenchman no less than an ancient Latin writer (Marouzeau, p. 103), or even more so; the ancients, with rare exceptions, did not write, still less publish their writings, unless they were interested in what they had to say. Hence nearly all ancient Latin writing has some virtue in its style, and by far the greater part of it has vigour. Even a writer like the ponderous elder Pliny, whose style lacks vigour if not interest, who nevertheless contrives, on the whole, to achieve readability despite his subject and on occasion actually has his purple patch, is in his degree as significant as the stiff and artificial, if more elegant writer (*sunt qui Propertium malint*), whose gaudy purple is so pervading that, were it not for their inanity, one could almost be grateful for a score or so of O. L.

Richmond's blank white pages. But these are extremes. Between them there is the great mass of writers whose writing is effective, whether their style aims at an elaborate perfection or is altogether unpretentious. What gives rise to the effect?

Fortunately Marouzeau is interested in finding the answer to this question, which is more than can be said of many critics. He also knows the history of the Latin language, which cannot be said at all of even more critics who presume to analyse "style" (in any idiom) on the ridiculous assumption that it concerns literature to the exclusion of language. Hence he has written a well-planned, clear, and readable book on Latin style, with a full understanding that every kind of linguistic element is important in that choice of forms (p. xv) which imparts what we call "style" to the totality of articulate expression that makes up a language. His book is marred by his national prejudice about the nature of the Latin accent (pp. 64 ff.; cf. p. 15, n.); and his spellings *cotidianus* (p. 172), *ahenus* (24), *Apenninicolae* (39), *quum* (11), *litera* (passim, *littera* once or twice), if not *mulcta* (84), I find shocking. But he has made good use of ancient authority, he has an admirable acquaintance with the evidence, he cites Latin texts judiciously, and he has a nice perception of those fine shades of meaning which style conveys. Quintilian was inevitably a valuable guide, and Marouzeau seems to know other ancient authorities as well as he knows his Quintilian. Inevitably a large proportion of the examples quoted to illustrate Marouzeau's observations, and of passages interpreted, were culled from the more commonly read authors; still more might properly have been quoted (as on p. 28) from Lucretius (I, 275 f., with Munro's note), and credit given where it belongs in several places where Vergil can be shown to have been in Lucretius' debt; for it is a commonplace that comparison of the two is often instructive. But in general the entire range of early and classical Latin literature is represented. There are acute observations on the use of certain alternative forms (e. g., nouns in *-men* and *-mentum*, the 3rd pers. plu. pf. ind. act. in *-ēre* and *-ērunt*, *quīs* and *quibus*) in which, as Marouzeau is well aware as apparently some editors of texts are not, there is, even in writers of verse, much more than mere metrical convenience involved. I dare also to add that those who insist on having Latin verse and prose read aloud, as well as those who still teach Latin composition, will find instruction for their pupils (e. g., pp. 33 ff. on "*rencontres de sons*") not to be had in the grammars or manuals. Marouzeau rightly stresses (p. 2) the Roman practices of writing expressly for the purpose of *recitatio*, and of reading aloud (so that to Romans all reading was a kind of "*recitatio*"). It may well be, as Professor H. J. Rose suggests to me, that Pollio

uttered his famous criticism of Livy at the end of a formal "recitatio," when the ejaculation "pataunitas," accompanied by a shrug of the shoulders, would contrast Livy's pronunciation with Pollio's own "urbanitas" (cf. Marouzeau, pp. 4 ff., especially pp. 6, 157, 170; and see my paper in *H. S. C. P.*, XLIV [1933], pp. 95 ff.). It is an important truth, commonly lost sight of by students of literature, that there is properly no language except spoken language (cf. pp. xvii, xviii).

Marouzeau's book deals in four main parts with sounds, the word, the phrase, and syntax, as well as with those more studied arrangements of words (repetition, rhythmical order, and the like) which are more conspicuous as marks of style. These four parts are preceded by an introduction devoted to the definition of style and "stylistique" and are followed by supplementary notes on topics such as "l'esthétique du style." There is a brief bibliography (add Lindsay's *Early Latin Verse* for its treatment of intonation of the sentence) and satisfactory indexes of subjects, words, and passages.

The original features of Latin style, quite independent of Greek, which Marouzeau has succeeded in tracing (p. 63) are mostly new information; and all of them important. His discussion of archaisms (p. 165) and of the distinction between vulgar and provincial and archaic forms is illuminating, if not quite fair to earlier writers on vulgar Latin. The least convincing part of the book is the section (pp. 83-91) called "physionomie du mot," which gives scope for subjective and arbitrary judgments; in his discussion of the "constitution du mot" (pp. 103-130) Marouzeau is on firmer ground—note especially his analysis of the usage of the comparatively rare *linquere* as contrasted with the frequent *relinquere*. Indeed the meanings of the simplex \**leiqu-* in all the I. Eu. languages have diverged so widely (e. g. "loan" in Germanic, Goth. *leihwan*, O. E. *lēon*; cf. Walde-Pokorny, II, pp. 396 f.) as to indicate that dialectal semantic specialization had been begun, but not completed, in that base in I. Eu. itself, except when the compensation of a prefix, of an infix (as in *linquere* itself), or of both, was made; and English *leave* (O. E. *læfan*) is generally connected by etymologists with a totally different base of totally different original meaning (Gr. ἀλείφω, Walde-Pokorny, II, p. 403).

The importance of Marouzeau's method in dealing with sounds I may illustrate from an example which he does not use. Hor., *Serm.* I, 10, 76 f.

satis est equitem mihi plaudere, ut audax  
contemptis aliis explosa Arbuscula dixit.

Why *plaudere* but *explosa*? Because *plaudere* is the polite applause of the *equites* (note the literary *satis est mihi*), *explosa* is

the actress "hissed off" the stage by the vulgar mob. Cf. *A. P.* 154 f. (*plosoris . . . plaudite*) and *Serm.* I, 8, 46 *displosa uesica* (cf. *Lucr.*, VI, 131); *plaudere* is hyper-urban (see Leumann-Hofmann, p. 79), and the compounds show the true ancient form (*plodere*), but it is clear that *explodere* and *displodere* (contrast *applaudere*) had acquired a vulgar flavour, notwithstanding an occasional use (e. g. *Lucr.*, VI, 285) not obviously vulgar.

From these more general criticisms I pass to several matters of detail. These do not seriously weaken my opinion of Marouzeau's book, that it is as learned and accurate as any of its predecessors in the field and more illuminating, as well as more readable, than most of them.

P. xii. There is a dangerous suggestion here, perhaps not intended, that thought is independent of language.

Pp. xvii-xviii. "La grammaire historique d'une langue essentiellement littéraire, celle du latin par exemple comme on l'a observé (cf. P. Kretschmer, *Die Lateinische Sprache: Einleitung in die Altertumswissenschaft*, 1, 3, p. 183) se réduit presque à n'être qu'une histoire du style." Substantially true, but overstated. The reference to Kretschmer should read 1, ed. 3, p. 119. And in fact Kretschmer, after giving a survey of the history of the Latin language, continues: *die Entwicklung der Literatursprache, die wesentlich Stilgeschichte ist, verfolgen wir hier nicht* (my italics)!

P. 5. The pronunciation of *ae* as a true diphthong is difficult to defend. *Caisar* (p. 13) is merely conservative spelling in a proper name. *plostrum* is possibly the true form; *plaustrum* hyper-polite (cf. *Prae-Ital. Dial.* II, p. 204).

Pp. 10, 84. *Pulcher*: note also the S. Ital. gloss *πολλαχρόν· καλόν* (*Ital. Dial.*, p. 48). There are contexts in which *pulcher* distinctly suggests "many coloured, variegated," as applied to scenery (e. g. *Verg.*, *G.* II, 137) or to the iridescent sheen of old gold.

P. 10. Read *χείλη, νύμφη*.

Pp. 11, 12. *chommode, hinsidias*: not in the manuscript, but "emendations" merely.

P. 23. But *ē* and *ō* from *ae* and *au*, being open, are not "toutes proches de *ē* et de *ō*" when those are close.

Pp. 25, 26. The insistence on sound as a clue to sense is excessive. If much of what Marouzeau and others (especially the social psychologists) have written on this topic were true, then a man ignorant of any foreign tongue has only to listen to it to understand it. An absurd etymology of *curculio*, vestiges of which still linger in Ernout-Meillet, was based on this false notion; as if anyone ever heard a corn-borer eating corn. Meaning in language is largely a matter of convention, apart, that is, from a few onomatopoeic forms.

Pp. 26, 80. To the English eye my colleague Professor Pease now enjoys canonization, like the Prime Minister St. Baldwin in French newspapers.

P. 26. Ov., *Met.* VI, 376. Cf. Plaut., *Rud.*, 528-34 (Son-nenschein).

Pp. 47 f., cf. p. 117. Observe, however, that rhymed verse has been developed (e. g. in English) despite the loss of inflexional endings. Latin (*pace* Marouzeau, pp. 54-60) does not really use rhyme; but it does readily admit the repeated *-orum* (*-arum*) ending, and the old explanation of the construction of the gen. of the gerund (of a trans. verb) with a dependent acc. pl. as due to a desire of avoiding the repetition of a long termination cannot be right.

P. 51. Cf. [Ennius] *apud* Cic., *Tusc.* I, 69.

P. 54. The *dindia macolnia* inscription is Praenestine, not Campanian.

P. 83. For a definition of "word" see Bloomfield, *Language*, II (1926), p. 156.

P. 86. But *duellum* is by no means the same thing as *dūel-lum*. As for *gnatus* "avec *g* prononcé," Marouzeau might have told us exactly how the *g* was pronounced before *n*.

P. 89. *Vlubrae*, if it really did suggest *ulula*, *lugubris* to the Roman, had nothing of the offensiveness of a pun to the modern English ear. For 1. 12. 29-30 read 1. 11. 29-30.

P. 97. This criticism of the use of long words is subjective and partly misleading. How could a Latin writer avoid them altogether? And Marouzeau himself (pp. 100 f.) quotes with approval Meillet's dictum that mere monosyllabic words are usually not "autonomes" but rather "accessoires." Again (p. 105) how could a Latin writer escape the *qu*-beginning of relatives and indefinites? Moreover on p. 106 the significance of the mere "terme grammatical" is recognized. I cannot agree either (p. 106) that Lucretius has erred in the structure of such a long sentence as II, 308 ff.—it was done deliberately and with good reason. It is a flaw of Marouzeau's method that he often confronts his reader with a mere *ipse dixit*.

P. 101. On *nihil* and *nil* cf. *C.R.* XXXIII (1919), pp. 56 ff.; XXXIV (1920), pp. 162 ff. (Housman) and XXXV (1921), pp. 23 ff. (Postgate).

P. 111. How "rare" exactly are verbs in *-escere*, not merely in number but actually in usage? Gradenwitz lists over five hundred of them.

P. 112. The missing reference is *apud* Cic., *Tusc.* I, 85.

P. 134. It is noteworthy that this use of *stare* is Oscan (*aasas ekask eestint, hürz dekmanniúis stait*) as well as Latin (*stant manibus arae*, *Aen.* III, 63).

P. 135. Not at all; *incedit* in *Lucr.*, III, 76 is no more an equivalent of *est* than *incessit* (*Aen.* I, 497) is of *fuit*.

P. 137. Hor., *Serm.* II, 5, 41, cf. Pers., I, 71 ff. (with Conington's note; and on metaphor in Latin, as well as on many other features of Latin style, see Postgate, *Translation and Translations*, London, 1922, passim.).

P. 152. Which is it? Does the degree of "affectivité" determine the frequency of usage, as Marouzeau seems to hold, or frequency of usage the degree of "affectivité" in a word?

P. 154. Cf. *puella* (O. L. *puera*) beside *puer*.

P. 159. *nummus* was not borrowed from Greek, nor (to answer Marouzeau's question in p. 160, n. 1) *age* (see Walde-Hofmann, p. 23).

P. 161. In general execrations are easily borrowed; cf. Plautus' *dierecta* (*Rud.* 1170, Nettleship *apud* Sonnenschein). There is always the dear old lady prepared to swear in French, but not in English.

On the other hand Cicero in the letters clearly drops into Greek at times in the way in which we might use a foreign expression as a matter of delicacy. In *Att.*, 12, 12 for example Cicero is feeling very deeply indeed. He is writing, as was but natural in writing of Tullia, in a very tender frame of mind. Now *τιμήν* in Latin would have been "honorem"; but it was impossible for that word, with all its commercial and political associations, to be used in that context. Graecisms in syntax, however, are another matter altogether (cf. p. 195) and occur far less frequently than some commentators on Latin texts seem to imagine.

P. 166. Marouzeau seems to have forgotten that *induperator* is Lucretian (e. g. V, 1227). But it is significant that Vergil, much as he must have needed the word, never uses it at all; *induperator* he would not, *imperator* he could not use.

P. 174. But *futtilis*, though vulgar (-*tt*-), is yet accepted in the literary language precisely because of its vulgar quality. It is a vivid word: "leaky, useless."

P. 192. The history of the gerund offers a complete explanation of the ablative in such constructions as *ita erumpendo . . . naues incendunt*.

P. 258. Compare the liturgy of the Atiedian Brothers at Iguvium.

P. 291. I miss an adequate discussion of what has been called "interwoven order" (*C. R.*, XIV [1900], pp. 357 ff., cf. Merrill on Catullus 30, 3), always "a mark of serious and careful diction" and as noteworthy in prose (Greek as well as Latin, e. g. Thuc., II, 37, 1) as in verse.

JOSHUA WHATMOUGH.

L. F. SMITH, J. H. McLEAN, and C. W. KEYES. *Thesaurus Linguae Latinae Epigraphicae*. The Olcott Dictionary of the Latin Inscriptions. New York. Columbia University Press. 1935. Vol. II, Fascicle 1. Pp. 24. \$0.75.

The many scholars who have learned from and profited by the late Professor George N. Olcott's lexicon to Latin inscriptions will gladly welcome this resumption of that enterprise, after a lapse of 23 years, in competent hands, and with every assurance that it will be steadily continued until completion, since it is supported now by the Columbia University Council on Research in the Humanities. The general form and method, which were on the whole commendable, have been retained; the printing has been admirably done, and in careful reading I have found less than a dozen misprints, none of them serious; the appearance of the page is clear and handsome, due to distinctly superior type-face; and a more durable paper has been used—unhappily, however, one that does not take ink so well, and there may be a good many, like myself, who prefer to annotate their margins in ink.

The collection of material appears to have been extremely thorough and the amount of hitherto unbooked material in the shape of new rubrics alone, not counting additions to the sum of already classified knowledge, is very considerable. The standard of accuracy is high; in scores of verifications hardly a single even trivial error was noted. The treatment is intelligent and scholarly. All in all this first fascicle (very properly so named, instead of 'fascicule,' as in the first volume) makes a prepossessing appearance and is sure of a welcome and blessing among scholars of all departments and specialties, for there are few fields upon which Latin inscriptions fail to throw light.

Admirable, however, as the work is, it comes a little short of perfection, and that occasionally along lines where improvement is possible and for the most part easy. Some of these points I will specify, in a running comment upon various matters, in the order in which I came to comment upon them in the margin of my copy.

There is no list of sigla. To be sure not many have been employed, but those that do appear should be clearly explained in a table printed, let us say, in the inside cover, now blank, of each fascicle. In particular the symbol † is not explained and not quite consistently employed either, for that matter, or else I have failed to grasp the system. Some distinction might well be made between omissions due to a lacuna and omissions due to a mere editorial condensation. It would look better to have such sigla as *A. E.* and *C. I. L.* large capitals instead of small, since those have been used for all other books and journals. That

lower case s is identical with small capital s in this font is likely to cause a slight confusion occasionally. It might have been well had the fact been stated that *A. E.* is published really under the rubric *Révue des publications épigraphiques relatives à l'antiquité romaine*, as a supplement to the *Révue Archéologique*, from which the series *L'Année Epigraphique* is only an offprint. Such information would aid librarians, where, as in my own institution, for reasons of economy, the separate publication is not taken, and especially younger scholars, for it must be remembered that the new Olcott will soon become a standard work of reference consulted by many who are not trained epigraphists. "*Berliner Urkunden*" too is a rather easy-going way of referring to *Aegyptische Urkunden aus den königlichen Museen zu Berlin . . . Griechische Urkunden*. With a table of sigla one can easily give the exact titles, together with some useful bibliographical guidance upon occasion and at the same time markedly shorten the citation of the same work in the body of the text.

I regret that the columns are not numbered separately and that no line numbers have been added in the space between the columns. These would have greatly aided brief and accurate references to a passage. As it is, one may have to write something like: "Olcott ATQVE, V. 2, p. 7, col. 2, 7 lines from the bottom" instead of "2, 15, 45." And better still, it would have been a real help to maintain continuous pagination from the very beginning, so that the troublesome volume number could have been omitted altogether. Indeed, it is not yet too late to do both these things; I feel confident that the majority of owners of the work would themselves gladly enter the requisite column and line numbers in this first fascicle, if only they could be assured that the publishers would put them in for the rest of the work. To be sure, a little more care would have to be taken in giving both columns the same number of lines (which is unusual in the present fascicle, although the rule in the first volume), but that is a simple matter, if one really wants to do it.

ASTURICENSIS. The *Thes. L. L.* gives additional instances, one from *Eph. Epigr.* 8, 310, the other from *C. I. L.* 2, 5124 (p. xlv).

ASTVTVS. It seems a bit odd to give here (and so frequently elsewhere) as a rubric a spelling which occurs in not a single instance quoted. The variant spelling should be listed in its proper alphabetical order, with a reference to the usual form, where the word might actually be treated, if one so prefers. That is, indeed, frequently done, but by no means always. In this particular case it is true that [A]STVTA has been restored in one instance, but since the entire supplement is based upon a group of inscriptions among the Ambarri, and there alone, while

the present stone comes from the immediate vicinity (Vienne), the only proper method is to follow spelling as well as substance in a supplement, and that the cutter was capable of errors is clear enough from his *SEMPLEX* immediately following.

On the whole "(sic)" seems to be used somewhat excessively. The line between errors and variants is a delicate one to draw, and although an occasional (sic) might be useful as a guarantee of accuracy, I think it would be better to give in parentheses the ordinary form, if that should appear necessary as a guide to understanding, and then to drop these additions, which otherwise in the completed work will surely run into tens of thousands. In any case, inside the very article in which the variant forms have been discussed, the addition of (sic) seems quite superfluous.

After all the erudition displayed under *ATACOTTI* one surely ought to have found a rubric *ATECOTTI*, which the authors think "the truest" form.

*ATALANTA*. The engraver of the cista no doubt intended "Atalanta," but he got it confused with the word 'athlete,' and the word *ATELETA* probably belongs as much under one heading as the other.

*ATALLA*. A reference to the further treatment in *Walde-Hofmann* would have been helpful.

The discussion of "Form" or "Forms" (both are used) is placed sometimes at the beginning of an article, where, without doubt, it properly belongs, but also not infrequently at the end, as under *ATRIUM*, *ATTIGO*, *ATTINGO*, *ATTOLLO*, *ATTONITVS*, *AVCTIO*, *AVCTOR*, etc.; again in the middle, as under *ATRIENSIS*; and sometimes it is omitted entirely, as under *AVARITIA*. More consistency would seem desirable on this point, since a large fraction of those who use this dictionary will be interested chiefly, if not exclusively, in matters of form.

*ATCERSIO* is an interesting new word, but it might have been cited according to a much better known work than "P. Syxtus," i. e. Diehl, *Inscr. Lat. Chr.* 2375, note. Incidentally, the equally new word *ACCERSITIO* (Diehl, 2375) could not be listed, because it falls in a part of the alphabet already covered by Mr. Olcott. But would it not be well to prepare a list of additions and corrections to the fascicles already published and present the results as supplements, either with each fascicle that appears or, better, in a fixed position at the end of each volume? Such a procedure would help greatly in keeping the work down to date.

Precise dates before Christ are given by a. v. c. (except once under *ATTALIA*), a somewhat old-fashioned and highly inconvenient procedure, but general datings (inconsistently enough) by the century B. C. I should strongly prefer a single method of dating.

*ATCORVN* may, of course, stand for *AMICORUM*, but just as likely for *ALIORUM* (Diehl), and that fact is also pertinent.

Suspensions are generally expanded where a ready understanding is helped thereby, but in view of the considerable number of possibilities with S. S., it might have been well to fill out that combination wherever it occurs, and not merely upon occasion. V. S. L. M. (under ATESMERTA and ATFRAFINEHAE) might also deserve to be expanded *propter simpliciores*, because, although obvious to scholars, it happens, curiously enough, not to be cited in precisely that form by either Cagnat or Egbert.

ATHLETA. Add 6, 30129 AC[LE]TE, as restored by Bücheler, *Carm. Ep.* 583.

ATQVE, 10b, line 5. MERVERAT is the actual reading, and the change to the subjunctive an emendation that may not be really necessary. There might well be devised some way of indicating when a letter in [ ] is supplied, and when it is merely restored by way of conjecture.—P. 10b, next to last line, the ATQVE ET of 6, 22073, and 6, 21279 (p. 11a, l. 20), is welcome support to the otherwise apparently isolated case in Pliny, *Nat. Hist.*, 20, 25; see *Th. L. L.* 1054, 4.

ATRAMENTVM. The quotation of the introductory words QUOS LEGERIT . . . , at the beginning of 1, p. 585, xiv, would have made the citation much easier to understand quickly.

ATINGERE, § 5. Catella is, of course, normally a "puppy" (unless the word is here used, in an obsolete sense, of any lady's pet dog), but this particular lap-dog was fifteen years old (verse 2). DULCES for DULCIS is one of the very rare misprints.

AVARE. I doubt if it is wise to separate the adverb completely from the adjective, without any indication of the fact.

AVARIS. *c. Apionem* is probably the better form.

AVATIO, with a somewhat misleading annotation, is a ghost-word, due to a mere misprint. The original edition of the *Fasti Silvii* (*Acta Sanctorum*, June, vol. 7); the reprint in the *Patr. Lat.* 13, 677; the first ed. of *C. I. L.*, vol. 1; and the commentary (p. 314) and index of the second edition, as well as such references to this particular text as Marquardt-Wissowa, *Handbuch*, 6, 372; Wissowa, *Religion*<sup>2</sup>, 319, 4; Hepding, *Attis*, 72, and 172, 5; Frazer, *Adonis, Attis, Osiris*, 267, 2; etc., all read, quite correctly *Lavationem*, the reference being to the well-known ceremonial bath of the statue of the Magna Mater; only in the text of the second edition does the misprint AVATIO unhappily occur. Before the word RESVRRECTIO there should have been left a considerable empty space (as in the original); or else a period, or at least a colon, should have been printed, for the words quoted constitute two separate entries and are not a single sentence. In this connexion I might remark that a little more punctuation (I recall only one case now, and that did not seem very important) would help in otherwise particularly obscure passages.

AVCTOR. At the end, under "Forms," a reference would have

been in place to AVTRIX (under AVCTRIX, which is slightly out of the correct alphabetical order).

AVCTORITAS, p. 22a, line 11, the name SERVIVS CALPVρνIVS has been omitted, contrary to ordinary usage, for no very obvious reason.

AVDACIA. Here at the end, in an inscription 50 lines long, and similarly, p. 24a, fourth line from the bottom, in an inscription 52 lines long, some real assistance would have been rendered by adding the number of the line. In inscriptions 10 lines or fewer in length, such numbers may properly be omitted, I presume; but when the text is much longer than that a line-number may save a good deal of time.

AVDIO. The order of citation of forms here, i. e. third person singular before first person, looks strange; and why should AVDITA ESENT (unnecessarily defined as "pluperf. subj. pass." What else could it be?) have been listed among unusual forms of AVDIO at all? The only slightly strange thing is the single consonant in ESENT, but that belongs under SUM.

A number of the remarks made above concern themselves with matters of form and may fairly be regarded as relatively unimportant. But only relatively; for any matter of form, which makes unnecessarily difficult the immediate apprehension of the subject-matter, wastes our energies; and such is the complexity and scope of our range of studies that we should do everything that can reasonably be expected of us to clarify and expedite the use of whatever we bring together. An arrangement of material which takes ten minutes to master, when five would have been sufficient, simply robs the reader of five minutes of his time.

But these matters are partly *quisquiliae*, and it is a relief and pleasure, therefore, to record in closing that this is an indispensable work admirably done which will remain standard for generations and to congratulate the authors.

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N. LEWIS. *L'Industrie du Papyrus dans l'Égypte Gréco-Romaine*. Paris, Librairie L. Rodstein, 1934. Pp. xiii + 187.

This book is a compendium of what is known regarding the papyrus plant and the objects manufactured from it. After a chapter devoted to a critical study of the geographical distribution of the papyrus plant in antiquity, the author passes to the manufacture of objects other than paper, to wit, baskets, mats, coverlets, rope, wicks, sieves, boats, clothing, sandals, furniture,

etc. Nor have the nutritive qualities of the stalk been overlooked. If I may be pardoned this slight frivolity, the papyrus plant provided the chewing gum of ancient Egypt. Today it has been supplanted for this purpose by the sugar cane.

The most significant use to which the papyrus plant was put, namely, the manufacture of writing paper, is reserved for separate treatment. The proportions which the author observes in this matter are just, since papyrus paper has been of incalculable importance in the history of western civilization. The basis of his discussion is of course the *locus classicus* in Pliny, which is skillfully annotated. In addition, the new evidence provided by papyrus texts has been used to throw light on such troublesome terms as *χάρτης* and its diminutives, *κόλλημα* and *σελῖς*. The chapter concludes with a bird's-eye view of the history of papyrus paper in the Mediterranean countries, not excluding modern attempts to revive its manufacture.

Dr. Lewis rightly equates *χάρτης* as a technical term with *volumen*; this meaning has been familiar for some time to specialists in papyrology. The non-technical use of the word for writing paper, however, must not be overlooked; see examples in Preisigke, *Wörterbuch*, s. v. As to *κόλλημα* and *σελῖς*, I am inclined to think that he has drawn too sharply the line of distinction. The evidence which he presents abundantly justifies his insistence that *κόλλημα* designates a sheet in a roll as it left the factory or a document in a *τόμος συγκολλησίμος*, whereas *σελῖς* is always the column of writing. It is clear that *κόλλημα* and *σελῖς* might coincide, and then the number of the sheet would be also the number of the column, but that is not necessary. Evidence of another sort has been overlooked. In a well known ledger of tax payments (*Archiv für Papyrusforschung*, IV, 95 ff.) the instalments are referred by *κόλλημα* numbers to the day-book from which they were taken. In the tax accounts of P. Iand., VII, 143, a similar use is made of *κόλλημα* numbers. I have been able to inspect at first hand two day-books of tax payments of considerable length (P. Mich. Inv. 4171 and 4172), and in these the sheets bear no numbers but the columns of writing are numbered continuously. Since the columns are not coterminous with the sheets, reference to an entry would necessarily be made by column numbers. The simplest interpretation of the evidence is that *κόλλημα* was the word employed in this connection. A sharp distinction between *κόλλημα* and *σελῖς* is understandable where it is maintained by commercial or practical advantage. Scribes who provided paper as well as writing services to their clients, and clerks who compiled *τόμοι συγκολλησίμοι* would not neglect the distinction, but in other fields *κόλλημα* may well have fallen together with *σελῖς*.

Somewhat earlier in the same chapter Dr. Lewis confronts a tantalizing problem. When the codex gained ascendancy over the roll as the preferred form for a book, papyrus paper lost ground before parchment. Dr. Lewis finds that papyrus does not lack the essential qualities of a good writing paper, including durability, and adds that papyrus simply gave way before a superior material. In what way superior, we do not learn. The author has not accurately envisaged the problem; he finds in papyrus rolls a demonstration of the remarkable durability of the material. Not the roll, however, but the codex is involved, and in this form papyrus is considerably less durable than parchment. Hartmann's reflection on the 10th century papyrus codex preserved at Munich (*Papyri und Altertumswissenschaft*, p. 469) is worth quoting: "Wer einmal gesehen hat, in welchem Zustand sich trotz seit langem sorgfältigster Aufbewahrung die Blattränder dieser Handschrift befinden, der begreift, warum sich der Papyruscodex im Konkurrenzkampf mit dem Pergamentband nicht behaupten konnte."

The fourth and last chapter is perhaps the most important. Here Dr. Lewis discusses with much care and lucid common sense the cultivation, manufacture, and sale of papyrus, and arrives at sane conclusions. The dominating problem is the extent to which the government exercised a monopoly over the industry. It appears that the cultivation of the papyrus plant in the Roman period was a private enterprise subject to the usual taxation. For its status under the Ptolemies there is no evidence. The manufacture and the sale of papyrus paper were the object of a partial monopoly in the earlier period, but participated in the general relaxation of government control which began with Augustus. Subsequent sections of the chapter deal with the charges which are known to have been associated with papyrus—the ἀναβολικόν, the χαρτηρά, and export duties. The cost of papyrus to the consumer, a problem about which we have learned a great deal in recent years, is competently discussed and illustrated with an instructive table in which the price of papyrus, the price of wheat, and the daily wage are arranged in parallel columns.

Dr. Lewis believes that the χαρτηρά was not, as Wilcken suggests, a tax on papyrus paid by persons who had documents drawn up at a grapheion, nor, as Zucker contends, a tax on the manufacture of papyrus, but a tax the payment of which effected the validation of a document. There is not sufficient evidence, and the hypothesis as it stands is not convincing. Very little is known about the χαρτηρά because the references to it in the papyri are still very few. In P. Mich. Tebt., I, 123 (45-47 A.D.) it occurs only in the expense accounts of the grapheion, and in each instance the payment for χαρτηρά is made by the

grapheion officials to the government. Nowhere in this group of papyri is there any indication that the *χαρτηρά* was a charge on the clients of the grapheion. In P. Tebt., I, 140 (72 B. C.) the payment is likewise recorded in the expense account of grapheion officials. The other documents in which *χαρτηρά* is mentioned give no clue to the occupation of the persons concerned. When the evidence is so slight and its bearing so uncertain, hypotheses might be multiplied indefinitely. The suggestion has not yet been made that the sellers of papyrus paper were responsible for the payment of *χαρτηρά*, which then would be a sort of license to sell. A hint of the stringent conditions which may have continued to restrict a grapheion's use of papyrus may be found in P. Tebt., III, 709 (159 B. C.).

In a brief appendix Dr. Lewis gives a few indications regarding the later history of the papyrus industry, from Diocletian to Justinian. Emphasis is here also placed on the extent of government control. Despite the limited space at his disposal the author has handled the pertinent sources with consummate skill. He sees in Justinian's policy a continuation of the principle of the *ἀναβολικόν* joined with a return to Ptolemaic practices.

Obviously this book will be indispensable to all who concern themselves at all deeply with the enormous contribution of the papyrus plant to western civilization. Its use is facilitated by the inclusion of a full subject index, an admirably complete list of the epigraphic, papyrological, and literary sources, and an index of significant Greek and Latin terms. A separate sheet contains two pages of corrections of typographical errors, but unfortunately two pages do not exhaust their number.

P. S. When I wrote this review, I had nothing more serious to offer on the subject of *κόλλημα* than a logical deduction. There has since come into my hands, through the courtesy of Professor A. E. R. Boak and M. O. Guéraud, a photograph of a papyrus (P.

Cairo, *Journal d'entrée*,  $\frac{3}{24} | \frac{9}{1}$ ) containing the first five columns of what was originally a quite long tax list. Preceding the text is the heading [*χειριστι*] καὶ λ[ημ(μάτων)] ὑπ(έρ) ιε (ἐτους). The date and provenience are fixed by reference to P. Mich. Inv. 4171 and 4172, tax lists of similar character written by the same hand at Karanis in the 13th and 14th years of Marcus Aurelius. At the top of the first column stands the pertinent indication *κόλ(λημα) α*, and at the top of the second column simply *β*. The numbers of the following three columns are lost. Of special interest for our problem is the position of *κόλ(λημα) α* and *β*, which are written not only each above a column but also on the same sheet of papyrus. This fact is evident even on the photo-

graph. Nothing further is needed, I believe, to prove that ancient usage did not always restrict the word *κόλλημα* to its original sense.

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F. JACOBY. *Theognis*. Walter de Gruyter, Berlin, 1931. Pp. 93.

M. 6. (Sonderausgabe aus den Sitzungsberichten der Preussischen Akademie der Wissenschaften, Phil.-Hist. Klasse, 1931, X.)

A little more than a century ago (1826) F. G. Welcker published his *Theognidis Reliquiae* and thereby became, in a large measure, the originator of Theognidean criticism. But he was consciously following the lead of Camerarius who, in 1551, had prepared an edition of the elegies and raised the question of their character and authenticity. Camerarius had only the inferior MSS upon which to base a text, since A was not known before 1815, when it was first made accessible by Bekker. Welcker's edition, based mainly upon A, was the first scientific presentation of the text with full commentary and introduction. This volume proved to be highly stimulating and there followed a great succession of books, monographs, dissertations, and articles treating the Theognidea in whole or in part. Germany was especially prolific; but Italy, France, and England made their contributions. Homeric criticism and the discussion centering about the Hesiodic poems were influential in directing the lines of investigation as they now were to be applied to the Theognidea and to Theognis himself. Needless to say, extreme views were presented in the course of time as well as those which were more moderate and restrained. But very often the followers of Welcker went much further in applying the critical method than Welcker himself had been willing to go. A summary of the literature dealing with the Theognidea would constitute an interesting chapter in the history of literary criticism and would be instructive at many points. Among the *cruces* the following would require first mention: the meaning of the "seal"; the time of Theognis; the origin of certain passages that closely resemble other poets; the repeated verses; the relation of the second book to the first; the relationship of Theognis to Cynus.

Professor Jacoby has long been known as an important contributor in the field of the Graeco-Roman elegy, and in his recent monograph he reviews the Theognis question in its more significant aspects thereby arriving at some interesting conclusions. In less than one hundred pages he has written a valuable commentary full of useful material.

Jacoby accepts the prevailing view that the "seal" is the name Cynus or Polypaides. Cynus is likewise the poet's beloved boy, and his σοφισμα (vs. 19) is explained by his having been the first among Greek writers to use the name of his beloved as a "seal." Consequently, no poem can be genuine if it lacks the address to Cynus (Polypaides) but not every poem having the address is necessarily genuine. By the subjective method, which he uses all too freely throughout the monograph, Jacoby then decides what poems he will accept. These are found mainly in verses 1-254. On literary grounds alone it seems to me that such an address is highly inappropriate as the "seal,"<sup>1</sup> and it has been shown<sup>2</sup> that Κύωνε could be dropped or inserted at will, a thing which actually happened in the source used by Stobaeus for verse 156, and in the inferior MSS in verse 213. On the other hand, in a short poem such as that represented by verses 69-72, the address to Cynus is employed twice, where its repetition as a "seal" (vs. 72) is clearly unnecessary. I still believe that the "seal" is the name Theognis, for an imitator such as Critias seemed to understand it thus. Nicander placed his name at the end and in the body of his *Theriaca* and *Alexipharmaca*.<sup>3</sup> Furthermore, we have Suidas' citation of a poem by Theognis in honor of the Syracusans, which alone shows that Theognis was thought to have written poems addressed to others besides Cynus.

Along with various other critics Jacoby reads too much of the Sophistic meaning into σοφισμένω (vs. 19). I do not believe that it suggests anything more than "acting wisely," "taking due precaution." Or, in view of the reputation for σοφία which the Greek poet had acquired in early times,<sup>4</sup> the word may be semi-technical even here and mean specifically "acting as the poet does." For we know that, beginning with the author (Hesiod?) of the *Theogony*, it became the practice of poet, gem-cutter, maker of statue or vase to attach his name to his work. It is enough to recall Phocylides and his proclamation, "this also is by Phocylides."

Jacoby discovers two poets by the name of Theognis in this collection: an earlier one who lived at Nisean Megara possibly about 570-530 B. C. and who reveals his personality vaguely to us through his Cynus-book, and a later writer who belongs to the fifth century B. C. and wrote the "prooemium" of verses 757-792. This section includes the much-debated poem of verses 773-782. This younger poet also wrote the elegy on the Syra-

<sup>1</sup> See T. A. P. A., LV (1927), pp. 191-3.

<sup>2</sup> E. Harrison, *Class. Rev.*, XLVI (1932), p. 253.

<sup>3</sup> E. Lobel, *Class. Quart.*, XXII (1928), p. 114.

<sup>4</sup> Cf. Pindar, *Ol.*, XIV, 7; *Pyth.*, III, 113; *Nem.*, IV, 2; *Isth.*, V, 28.

cusans mentioned by Suidas. So far as I am aware, this identification of a second and younger Megarian poet is entirely original with Jacoby and adds one more name to Reitzenstein's list of seven writers who, in addition to Theognis, he thought could be identified in the elegies.

One can readily agree with Jacoby that it is not easy to place verses 773-782 in the sixth century, in view of Herodotus' description of the advance of the Persians as they pillaged Greece<sup>5</sup> and especially Megara.<sup>6</sup> But source-material for the sixth century is all too scanty, and the arguments of Hudson-Williams<sup>7</sup> may be adequate, in which case we do not need to bring Theognis (or a second Megarian writer) down into the fifth century. But it is very likely that Theognis reached an advanced old age and may well have lived into the time of the later Persian Wars. This possibility can not be disregarded. But it is interesting to note that by a somewhat similar analysis Jacoby more recently has discovered two distinct writers in the Homeric *Hymn to Apollo*.<sup>8</sup>

A third part of this collection Jacoby can assign to no definite writer or writers.

Jacoby thinks that all the repeated verses are non-Theognidean. But it is sufficient to examine one of a group of three alliterative poems composed of verses 1161-2, 1162 a-f, 1163-4, to the general character of which Edmonds<sup>9</sup> has called attention. The initial verse of each of the three poems begins with O. Edmonds has listed a number of such groups beginning with the same letter, whatever it may be, and he thinks that there is some deliberate arrangement of the poems after a definite plan. At any rate, verses 1162 a-f are inserted between 1161-2 and 1163-4, while the three groups begin with the same letter. Now 1162 a-f repeat 441-6 without change, but the latter do not stand within such an alliterative group. In view of Edmonds' list, verses 1162 a-f (=441-6) very likely were not inserted *by accident* where they stand. It is pretty clear that they represent the plan of some organizer of the collection whether he be the original poet or some anthologist who is responsible for the present form of the collection, as many hold. Herein we have at least one indication that six of the repeated verses did not get into the collection by mere chance.

Jacoby assumes without argument that this collection of

<sup>5</sup> Herod., VIII, 30 ff.

<sup>6</sup> Herod., IX, 14. Cf. Paus., I, 40, 2-4; 44, 2.

<sup>7</sup> See *J. H. S.*, XXIII (1903), pp. 1 ff.; *The Elegies of Theognis*, pp. 4 ff.

<sup>8</sup> *Der Homerische Apollonhymnos*, Berlin, 1933.

<sup>9</sup> See *Elegy and Iambus*, I, pp. 14 f.; cf. E. Harrison, *Class. Rev.*, XLVI, p. 255.

poems represents some kind of anthology. That is, of course, the prevailing view. But Welcker<sup>10</sup> was less positive of this and pointed to the fact that, if this collection is an anthology, it differs from other anthologies. I myself have been unable to discover any anthology that is like it and I think that such a view of the matter ought stoutly to be challenged.<sup>11</sup>

Finally, Jacoby believes that the second book is not later than the fourth or fifth century B. C. To this subject he devotes only a brief discussion and it is to be regretted that he did not give more attention to such an important question. For careful study will show, I believe, that this part of the collection is clearly pre-Alexandrian at least and probably much earlier than that.

The greatest difficulty in the path of one who would study the Theognidea lies in the fragmentary character of early elegy. Source-material for the history of the sixth century B. C. is likewise too limited. This leads one to move with caution whether one would draw conclusions positive or negative. But if one must disagree with a good deal that Professor Jacoby has to say, it is chiefly because he applies the subjective method all too freely. Surely many of his conclusions are not as certain as he considers them to be.

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PIETER DE JONGE. Sprachlicher und historischer Kommentar zu Ammianus Marcellinus XIV. 1-7. Groningen. J. B. Wolters. 1935. Pp. 149.

Ammianus Marcellinus, that calm and judicial pagan staff officer who gave us our best history of the times of Constantius, Julian, and Valentinian—a highly important transition epoch—has lacked explanatory notes and an English translation for generations. The latter will soon greet us in the Loeb Series, by Prof. John C. Rolfe; in the present booklet, a Groningen Litt. D. thesis by a young Dutch scholar, we have the beginning of a modern linguistic and historical commentary in German. In his modest preface Dr. De Jonge announces the publication within a year of his notes on the remainder of the first book (XIV) and his hope of continuing the series rapidly. He deserves every encouragement. In spite of a certain youthful positiveness, the notes show wide reading and are helpful and stimulating. It is obvious that the text will benefit from his studies, and I am inclined to accept some suggestions of a return to the

<sup>10</sup> *Theognidis Reliquiae*, p. cv.

<sup>11</sup> See *T. A. P. A.*, LVIII, pp. 172, 184; *A. J. P.*, L, pp. 357-8.

reading of V where I had altered it. I observe that he has failed to notice Miss Seguire's brilliant correction in XIV, 6, 6—a quotation from Cicero; and in general he would lay scholars under obligation by mentioning good recent emendations, like Damské's *torporem* in XIV, 2, 9. There is a good bibliography, omissions in which will be supplied by Rolfe's; the book is well printed and misprints are rare.

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ALOIS WALDE. Lateinisches etymologisches Wörterbuch. Dritte neu bearbeitete Auflage, von J. B. HOFMANN. 8. Lieferung. Heidelberg. Carl Winters Universitätsbuchhandlung. 1935.

The seventh fascicle of this invaluable work was reviewed in this JOURNAL, LV (1934), pp. 290-291. The present fascicle covers *fulmen* to (*h*)*erctum*, and in its 80 pages (561-640) matches the contents of 48 pages (324-362) of the second edition. At this rate there will be about 11 more fascicles before the end of the alphabet is reached. But the quality of this revision of Walde's work makes the waiting worth while.

What has been said here of previous fascicles holds true for the present one. Many caption-words are added, mainly late words, and I am glad to see that the old Italic goddess *Fur(r)ina* now has her place. The bibliographical data are incredibly rich and complete; Dr. Hofmann is doing us great service. We can only express our gratitude and our hope that other fascicles will soon be in our hands.

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JOHANNES KIRCHNER. *Imagines Inscriptionum Atticarum: Ein Bilderatlas epigraphischer Denkmäler Atticas*. Berlin. Verlag Gebr. Mann. 1935. Pp. 30 and 54 plates. 4°.

This volume makes available, with concise explanatory notes, a collection of photographs of Athenian inscriptions ranging in date from the eighth century B. C. to the fourth century A. D. The inscriptions selected have been chosen so that every period is represented, and it is thus possible to trace the development of letter forms used in the inscriptions of Athens from the earliest to the latest times. Such a reference album has been much needed and will be appreciated by all epigraphists. It could have been edited by no one more fittingly than by Kirchner,

whose long and fruitful work on the *editio minor* of the *Corpus* has enabled him to know and to choose for his collection the most significant monuments.

Kirchner's main observation (pp. 5-6) that from the earliest times to the beginning of the Empire a certain regularity in change and development of the letter forms may be observed, but that letter forms alone are of little use in dating the later inscriptions seems incontestible. It may be added also that even in early times consideration must often be given to the character of the monument, whether public or private record, whether a vase of terra-cotta or a stele of stone. It is dangerous to argue too closely from one type of document to another.

In so far as possible the inscriptions illustrated in the album are those of fairly certain date. For the fifth and fourth centuries B. C. the dates of most documents are well fixed. The third and second centuries are more of a problem, and some revision is still necessary. The archon Charikles, for example, of No. 89 belongs surely to 196/5 and not to 239/8 (cf. *Hesperia*, IV [1935], p. 556, note 1); and the year of Diogeiton (No. 85) is probably 270/69 and not 252/1 (cf. *ibid.*, p. 582). Letter forms thus attributed to the middle of the third century belong, therefore, in the early third century and in the early second century. Indeed, the lettering of No. 89 shows in the photograph, in my opinion, closer affinities with that of No. 102 than with that of the documents grouped with it on plates 36 and 37. New researches made possible by discoveries in the Athenian Agora lead also to several other probable changes in dates given. A new document of the year of Charikles, to be published soon, mentions the archon Proxenides, and a new fragment of *I. G.*, II<sup>2</sup>, 915 (No. 97) gives the secretary's demotic and allows the definite date 203/2. In spite of recent contrary arguments the stele recording honors to Strombichos (No. 78) is probably to be dated in 268/7 rather than in 280/79 (cf. *Hesperia*, IV [1935], p. 572), and in its place No. 88 probably belongs in 280/79 (cf. *ibid.*, p. 578). Another new document from the Agora, as yet unpublished, shows that Apollodoros (No. 111) belongs definitely after 81/0.

It is not yet possible to date a document, even in the Hellenistic period, solely on the basis of letter forms except within rather general limits (e. g., documents with letters like No. 96—especially the alphas, deltas, and lambdas—belong in the late third or perhaps very early second century) or when a particular hand can be identified in the writing. Even so, such matters as surface treatment of the stone, disposition of the letters (stoichedon or not), relative height, width, and thickness of the stele must be taken into account.

I note that the reference *Amer. journ. arch.* in the text for

Nos. 82 and 84 has been erroneously given for *Amer. journ. phil.*, and that the commentary on Nos. 32-33 refers to No. 32 as No. 31 and to No. 33 as No. 32. In the description of the Marathon epigrams Kirchner has accepted as probable Wilhelm's suggested reconstruction of the monument as an upright pilaster with the inscriptions reading down the side from top to bottom. There are physical difficulties (among others) against this interpretation so serious as to make this well-nigh impossible, and which I hope that Oliver, who first published the new fragment, will take occasion to point out at some early date.

But in spite of some few uncertainties as to exact date or interpretation, the album marks a distinct advance in epigraphical study. The next best thing to working with the stones themselves is to have not only the transcribed text of the *Corpus* but an accurate paper impression or photograph. The photographs here given are excellent reproductions, and about them as illustrative material are gathered many minute and valuable observations. Kirchner has had the opportunity, enjoyed by few, of basing his comments on a first-hand study of practically all the Athenian inscriptions.

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INSCRIPTIONES ITALIAE. Vol. XI, Fasc. II, Eporedia (by J. Corradi), 1931. XI, Fasc. I, Augusta Praetoria (by P. Barocelli), 1932. X, Fasc. II, Parentium (by A. Degrassi), 1934. Rome. *La Libreria dello Stato*. 170 lire for the three.

This great work, supported by the Italian Unione Accademica Nazionale, is to consist of at least one volume for each of the fourteen *Regiones* of Italy, and will include Christian inscriptions well into the middle ages. Thus, with the inclusion of recent finds, it will probably contain twice as many items as the Italic volumes of the Berlin *Corpus*.

Its great value will be in its completeness and in its generous offering of good photographs of all important items. This latter point is of special value since, in the case of most inscriptions, we cannot reach even an approximate dating except by a study of the script. So far the publication of three towns has not added novelties of any great interest, but one may even now feel sure that the difficult editorial work promises to be satisfactory. The fascicle on Tibur, soon to appear, will doubtless provide a surer criterion of how new material of importance will be treated. Since scores of scholars had to be assigned for simultaneous work, it was of course a temptation to let each

editor begin his own fascicle with number 1; but this will lead to great difficulties in referring to the inscriptions, and I fear that for this very reason the *C. I. L.* numbering will long remain standard. Since only 470 inscriptions have so far been published, it may not be too late to remedy this defect.

Every good university will have to have this splendid publication, but it will be very costly.

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Aristotle. On the Soul, Parva Naturalia, On Breath with an English Translation by W. S. HETT, M. A. (Loeb Cl. L.). Cambridge, Harvard University Press, 1935. Pp. xii + 519.

From the 33 Berlin pages of the *De Anima* Mr. Hett has produced a translation containing 116 major errors; his English of the first five essays of the *Parva Naturalia*, which fill 29 pages of the Berlin edition, misrepresents the Greek in 121 passages. The remainder of this volume I have not troubled to read.

All of the errors I have counted are serious, for they result either in a misrepresentation of Aristotle's doctrine or in a perversion of his argument; in many cases, moreover, the resulting English gives no possible meaning whatever. The following examples are fairly representative of the whole list.

*De Anima* 422 B 6 ff.: αὕτη γὰρ ἀφή γίνεται τοῦ πρώτου ἕγρου ("for the latter is contact with the original moisture") Hett translates: "for this contact takes place with the first moisture."

*De Anima* 424 A. 1-2: ὥστε τὸ ποιῶν οἷον αὐτὸ ἐνεργεία, τοιοῦτο ἐκείνο ποιεῖ δυνάμει ὄν ("so that the agent which makes the patient actually like itself does so because the patient has that character potentially") Hett translates: "so that what makes something actually like itself has these qualities potentially itself," thereby introducing a novel Aristotelian doctrine.

*De Anima* 427 A 6-7: δυνάμει μὲν γὰρ τὸ αὐτὸ καὶ ἀδιαίρετον τάναντία, τῷ δ' εἶναι οὐ, ἀλλὰ τῷ ἐνεργεῖσθαι διαιρετόν ("for the same indivisible thing is potentially the opposites but not essentially so; rather is it divided in being actualized . . .") Hett translates: "for the same thing, then, becomes indivisible potentially, but not in essence, but divisible actually."

*De Anima* 430 A 7-8: ἄνευ γὰρ ὕλης δύναμις ὁ νοῦς τῶν τοιούτων ("for mind is the power of becoming such things without their matter") Hett translates: "for mind in such cases is potential and without matter."

*De Anima* 433 B 19: ᾧ δὲ κινεῖ ὄργάνῳ ἢ ὁρεῖς ἤδη τοῦτο σωματικόν ἐστίν ("the instrument with which appetency produces motion

is strightway material") Hett interprets: "the instrument of moving is the craving and this is bodily."

*De Anima* 434 B 28-29: . . . τῷ ἐκείνῳ μὲν ὑπὸ τοῦ αἰσθητοῦ πάσχειν καὶ κινεῖσθαι, αὐτὸ δ' ὑπ' ἐκείνου ("by reason of the fact that the medium is affected and set in motion by the sensible object and the animal itself by the medium") Hett turns into this startling doctrine: "in which the animal is affected and is moved by the sensible object, and the sensible object by the medium."

Apart from any knowledge of Greek or of Aristotle's doctrines, the nonsensical character of such English sentences should have aroused the suspicions of the translator or, at any rate, of the board of editors.

One further characteristic of this volume must be mentioned. The translator has reprinted the text of Bekker with very few alterations, going so far as to retain *μή* in 428 B 30 and *ἦ* in 418 B 11, both of which are merely typographical errors in the Berlin edition. Nevertheless, I have noticed ten passages in the *De Anima* where, although he prints Bekker's text, he translates in accordance with the text and translation of Hicks. Similarly in the *De Sensu* and *De Memoria* there are two places where Bekker's text is printed, although the translation follows the reading and rendering of G. R. T. Ross.

<i>De Anima</i>	402 B 6	καθ' ἕκαστον	(καθ' ἐκάστην Hicks)
"	"	403 A 14	ἄψεται τούτου (ἄψεται οὕτω Hicks)
"	"	406 B 15	κινεῖ. (κινεῖ, Hicks)
"	"	408 B 9	τοιούτον (τὸ τοῦτο Hicks)
"	"	410 B 27	οὐδὲ μᾶς (οὐδεμᾶς Hicks)
"	"	418 B 11	ἦ (ἦ Hicks)
"	"	420 A 7	αὐτό (αὐτός Hicks)
"	"	423 A 1	σάρξ; (σάρξ, Hicks)
"	"	425 A 31	ἦ αἱ αὐταί (ἦ αὐταί Hicks)
"	"	431 A 24	τὰ ὁμογενῇ (τὰ μὴ ὁμογενῇ Hicks)
<i>De Sensu</i>	442 A 7	τοῦτο ἐν	(τοῦτο τὸ ἐν Ross)
<i>De Memoria</i>	451 B 1	ἐστὶ	(ἐστι Ross)

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H. G. GADAMER. *Plato und die Dichter*. Frankfurt, Klostermann Verlag, 1934. Pp. 36. (Wissenschaft und Gegenwart, No. 5.)

If there still exist interpreters who would undertake to "excuse" Plato's attack on poetry as merely a criticism of what he felt to be the degenerate art of his own day, they will profit by

this lecture. Professor Gadamer rightly insists that the attack is directed against poetry as such and through it at the Greek conception of culture and its confidence in the "nature of humanity"; and in the course of his argument he makes some sensible remarks about the purpose of the *Republic* which, while old enough, obviously need repetition in the light of the use to which that writing is today being put. In underlining the importance which Plato saw in the power of "imitation" to alter the character of the imitator Professor Gadamer comes very near to saying what should have been noticed long ago. However true and certainly important the analysis of the relationship of the critique of poetry to Plato's notion of the purpose of philosophy is, it is *prima facie* probable (and many passages support the supposition) that the enmity toward poetry was in part due to the strong effect that poetry had upon the man. Only one who constantly feels the "physical thrill" of art can rightly know and fear the dangerous force which it possesses.

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